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**ROYAL COMMISSION
ON
CANADA'S ECONOMIC PROSPECTS**

PRELIMINARY REPORT

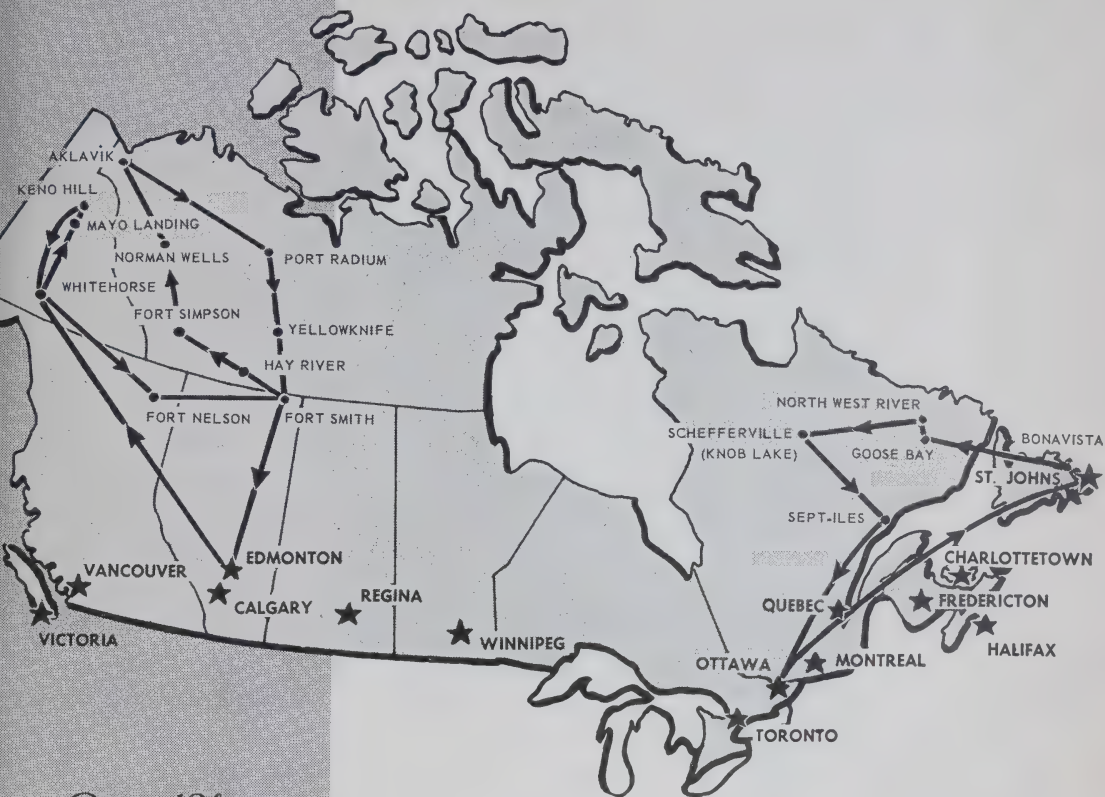
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Royal Commission on Canada's Economic Prospects



Other Places Visited

WESTERN ARCTIC TRIP

Arrived:	1955
EDMONTON	AUG. 19
WHITEHORSE Y.T.	AUG. 20
MAYO LANDING	AUG. 20
KENO HILL	AUG. 20
WHITEHORSE	AUG. 21
FORT NELSON	AUG. 21
FORT SMITH	AUG. 22
HAY RIVER	AUG. 22
FORT SIMPSON	AUG. 23
NORMAN WELLS	AUG. 23
AKLAVIK	AUG. 24
PORT RADIIUM	AUG. 25
YELLOWKNIFE	AUG. 27
FORT SMITH	AUG. 28
EDMONTON	AUG. 28

EASTERN TRIP

Arrived:	1956
ST. JOHN'S	JULY 8
BONAVISTA	JULY 10
GOOSE BAY	JULY 11
NORTH WEST RIVER	JULY 11
SCHIEFFERVILLE	
(KNOB LAKE)	JULY 12
SEPT-ÎLES	JULY 14

Public Hearings

ST. JOHN'S, NFLD.	OCTOBER 18, 1955
HALIFAX, NOVA SCOTIA	OCTOBER 19-21, 1955
CHARLOTTETOWN, P.E.I.	OCTOBER 24, 1955
FREDERICTON, N.B.	OCTOBER 26-27, 1955
WINNIPEG, MAN.	NOVEMBER 14-16, 1955
REGINA, SASK.	NOVEMBER 17-18, 1955
EDMONTON, ALTA.	NOVEMBER 21-23, 1955
CALGARY, ALTA.	NOVEMBER 24-25, 1955
VICTORIA, B.C.	NOVEMBER 28, 1955
VANCOUVER, B.C.	NOVEMBER 30 TO DECEMBER 2, 1955
QUEBEC, P.Q.	JANUARY 16, 1956
MONTREAL, P.Q.	JANUARY 18-20, 1956
TORONTO, ONT.	JANUARY 23 TO FEBRUARY 3, 1956
MONTREAL, P.Q.	FEBRUARY 20-24, 1956
OTTAWA, ONT.	FEBRUARY 27 TO MARCH 9, 1956

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PRELIMINARY REPORT

To His Excellency the Governor General in Council,

MAY IT PLEASE YOUR EXCELLENCY,

We, the Commissioners, appointed as a Royal Commission in accordance with the terms of an Order in Council dated 17th June, 1955, to inquire into and report upon the long-term prospects of the Canadian economy, that is to say upon the probable economic development of Canada and the problems to which such development appears likely to give rise:

BEG TO SUBMIT TO YOUR EXCELLENCY THE FOLLOWING
PRELIMINARY REPORT.

INTRODUCTION

1. THE TASK which the Commission has been given (as set out in the Order in Council published as Appendix A to this report) has been to make a broad examination of the Canadian economy, to survey the directions in which it seems likely to develop over the next 25 years and to discuss some of the problems which Canada may expect to encounter along the way. This is a formidable undertaking; and it was clear to us from the outset that we would need a great deal of help and co-operation if we were to carry it out. For that reason we not only recruited a large and competent staff but also called on many other Canadians in almost every walk of life for assistance. The response to our appeals was generous in the extreme. It came from officials in the service of the federal, provincial and municipal governments, from business institutions, from organized labour, from farm organizations, from universities and from many other interested groups and associations. Contributions to the co-operative undertaking that it was our responsibility to organize and direct came from every province in Canada. Some individuals, institutions and organizations agreed to make studies for us of particular subjects at considerable cost to themselves, both in time and money. Many others presented briefs at our public hearings; and the quality of most of the submissions was of a remarkably high order. These briefs represent considered opinions, based upon long hours of thought and labour, of many people engaged in widely different activities. The briefs themselves and the discussions of them at the public hearings have been invaluable to us in reaching our conclusions. They are listed in Appendix F, and a statement of the other acknowledgments we wish to make is given in Appendix B.

2. When our work is complete, it will have resulted in the submission of a final comprehensive report and of a large number of studies to be presented separately. Our final report will include the detailed examination we have made of the Canadian economy and a reasoned survey of its

economic prospects. It will be based on the information which we obtained in the course of the public hearings and on the studies that have been prepared at our request. Many of these studies have already been completed and some of them have gone to the printers; in other cases, the considerable task of editing and checking yet remains to be done. Our work however has reached a stage where we think we can usefully present a preliminary report of our conclusions about future trends and about some of the problems we foresee.

3. We have been impressed by the wide public interest that has been shown in our inquiry and would be reluctant to withhold any longer than necessary either our broad conclusions or the particular studies that are now ready. Moreover, the mass of documents which we will ultimately submit for publication will be so voluminous that, if they were to appear at one time, they would be extremely difficult to digest. It is for these reasons that we have decided to submit this preliminary report with such studies as are now finished and also to present the further studies in serial fashion, as soon as they can be made available. It should be understood, however, that our work will not be complete until the examination we have made of the Canadian economy and its prospects has been incorporated in a comprehensive final report which will provide a wider base for our conclusions than is contained here. In that report, which is now in preparation and which will appear sometime in 1957, will be gathered together the facts and analyses that have influenced us. Our forecasts will be given in fuller form and more explanation and qualification of them will be provided.

4. As will be seen from the following pages, the emphasis in this preliminary report is on the policy suggestions that we feel the progress of our inquiry enables us to make. Our mandate, essentially, has been to describe and analyze the economy and consider its prospects. In the process of making such a survey, however, a number of particular problems have cropped up to which we think attention should be drawn. These problems affect many different areas of the economy. To suggest precise solutions to all of them would be to claim an omniscience that we do not possess. In some cases, therefore, we have done little more than to draw attention to the problem. In other cases, we have indicated a number of possible courses of action. In still others, we have ventured to make fairly precise recommendations.

5. Because of the emphasis laid in this preliminary report on the problems we foresee in connection with Canada's economic prospects, a good deal is said about the possibility of useful government action in a number of different fields. We should not wish the inference to be drawn that any significant change is contemplated in the broad framework in which our economy has operated. The Canadian economy has developed under a

system where most decisions are taken in response to market considerations. Government policies have been influential, but their effect has been to modify rather than replace the process whereby individual and corporate decisions substantially determine the shape and direction of economic development. We believe that the realization of Canada's tremendous potential will depend in large measure on the maintenance of a flexible market economy. But we believe equally that governments must continue to adapt their role in economic affairs to changing situations and, in particular, that they must accept the implications of the effort to maintain a high level of employment.

6. To provide a setting for the various policy suggestions that we wish to put forward, we are including in this report a selection of our main statistical forecasts. We would warn, however, that they must be read with caution. The only thing that can be said with certainty about such forecasts is that events will prove them wrong, at least in part. To stress that fact, however, is not to minimize the value of a survey of future probabilities. On the contrary, we believe that such forecasts, fallible though they necessarily are, may be of high value in suggesting measures for dealing with the problems which may be expected to arise. At the same time we believe that such a survey of future probabilities and developments should be critically re-examined at fairly frequent intervals. Undoubtedly some problems which loom large today will fade into relative insignificance in the years to come, while new and pressing problems will emerge which cannot now be foreseen. This would seem to call for flexible policies and a willingness to revise them with changing circumstances.

7. Throughout our work we have made a number of general assumptions on which all our forecasts are predicated. Of overriding significance in the world today is the fact that two great powers, the United States and the Soviet Union, both possess weapons of mass destruction in such quantity that their use might destroy organized society throughout the world. Other countries may well acquire an armament of similarly frightening power before many years are over, and this would add to the potential danger. Within a few years intercontinental missiles with nuclear warheads will be in existence, capable at a single blow of crippling, if not completely destroying, any city, no matter how large. A single hydrogen weapon, for example, could devastate and make uninhabitable an area approximately 50 miles wide and 200 miles long. Such an area, stretching along the shores of Lake Ontario, might extend from Hamilton at one end to Kingston at the other, and include within its orbit Toronto, Oshawa, Port Hope and Belleville. A similar area along the St. Lawrence River might run from the Ontario-Quebec border to Quebec City and contaminate with radioactive fall-out all the cities, towns and villages in

between, including the entire population of Montreal. These are among the new facts of life and death in this nuclear age. In spite of them, we have been bound to assume, though it may be said quite arbitrarily, that the forces of reason will prevail and that man will not initiate his own extermination on a global scale. Put a little more exactly, our assumption has been that, although the burden of defence will remain heavy, there will not be a global war during the period under review.

8. We have assumed also that there will not be another depression of the kind which we experienced in the thirties and that there will not be prolonged periods of mass unemployment. We find that this is a commonly held assumption based upon modern economic reasoning, developments in monetary and fiscal policies and a considerable amount of actual experience. Much will depend of course upon what happens in the United States. If there should be widespread depression in that country it would without question spread to Canada and to other countries. We are not inclined, however, to be unduly pessimistic on this score. In our final report we shall have something to say about the role which government policies can play in promoting a high level of employment and the limitations of these policies in achieving this objective. It will suffice for the purpose of this report to say that we expect there will be many ups and downs in the level of economic activity in Canada over the next 25 years but that we assume there will be no major depression during that period.

9. We have also assumed for the purpose of making statistical projections that there will be no major change in the policies of governments which have a bearing on economic development. This does not mean that in fact we expect that present policies will, or should, remain static and rigid. We have interpreted the mention in our terms of reference of the problems to which economic development seems likely to give rise as an invitation to consider and discuss changes in policy where this seems appropriate. Indeed, it is with such questions that this report is primarily concerned.

10. The section which immediately follows presents a summary of our forecasts of the growth of the population and its distribution and our estimates of the increase in Canadian output and incomes which may occur over the next 25 years. It is followed by ten sections in which we consider the prospects and problems of various parts of the Canadian economy and discuss matters relating directly to them. The first seven of these sections cover the primary resource industries—agriculture (with a special section on wheat), fisheries, forests, mining and energy sources, including electric power, oil, gas and coal. The following three sections are concerned with the secondary manufacturing industries, tariff policy and transportation. Sections 13 to 15 relate largely to capital investment and summarize our conclusions about capital requirements, the implications

of foreign investment in Canada and the special financing difficulties of the municipalities. Finally, we consider a number of matters of more general concern for our balanced growth and development. These include the special problem of the Atlantic Provinces, immigration and requirements for trained manpower.

THE NEXT TWENTY-FIVE YEARS: FORECASTS OF GROWTH

1. THE SHAPE of the future that we foresee is presented statistically in this section in a number of tables which show our main aggregate forecasts. Table I is a summary of the forecast of population. Tables II to IV contain more detailed population projections based on three alternative immigration assumptions. Projections of the labour force are shown in Tables V to VII. The growth of the Gross National Product is then estimated in Table VIII and the growth of per capita Gross National Product is shown in Table IX. In Tables X and XI the total output and the total labour force that we anticipate are distributed among the various sectors of the economy. Finally, Table XII indicates how the population may be distributed between metropolitan, urban and rural areas.

2. Forecasting population growth, like other forms of forecasting, is full of pitfalls. The estimates shown in Tables I - IV may prove wrong because mistaken assumptions are made about mortality rates, fertility rates or net immigration. If the population estimates that are published with this preliminary report are to be interpreted properly and used circumspectly, the detailed assumptions underlying them must be clearly understood.

3. Mortality rates (that is, the number per 1,000 of the population who die each year in the various age groups) have been declining steadily in Canada as in other countries, and it is assumed that this trend will continue. The detailed assumptions that have been made about mortality rates will appear in the study made for the Commission on *Output, Labour and Capital in the Canadian Economy*. But since the margin of error in this field is not large, it is perhaps unnecessary to say more about the rates assumed than that we expect a marked decline in present infant mortality rates.

4. The assumptions made about fertility rates, can have much greater leverage on population forecasts. This is so because the trends that have

to be taken into account are much more complex and unpredictable than trends in mortality rates and the range of reasonable assumptions is therefore wider. The number of children born for every 1,000 women in the various age groups of the population will depend on how many women marry, on the age at which they marry and on the number of children they have. The marriage rate in Canada has been high in comparison with other Western countries and we assume that it will remain so. The age at which women marry has been falling and we assume that this trend may continue. The average size of families has been affected by two contrary trends. On the one hand, large families (those with five or more children) are now less common in Canada than they used to be. On the other hand, there are indications that fewer marriages are childless and that the average number of children among the smaller families has increased somewhat. The fertility rates that we have assumed for the future have been chosen with a view to taking into account all these trends. They may perhaps be adequately described by saying that, if they prove accurate, they would result in a Canadian birthrate over the next 25 years only slightly lower than that of the last decade, when the birthrate was higher in Canada than, for example, in the United States, Western Europe, Japan, India or Pakistan.

5. The estimates of fertility rates are also conditioned by assumptions about general prosperity and employment in Canada over the next two or three decades. This is necessary because there seems to be a clear correlation between the birthrate and the levels of economic activity and employment. Underlying the forecasts made for the Commission is the assumption that there will be no major, prolonged economic depression during the period under consideration and that the proportion of those in the labour force without jobs and seeking work will be no higher than it has been over the last five years. If those assumptions were to prove false and if there were to be a prolonged decline in business activity, the birthrate would in all probability also decline and the natural increase forecast in the accompanying estimates would not be realized.

6. Net immigration is influenced by comparative levels of economic activity in Canada, Western Europe and the United States. It is also affected by political events, by the risks of war, and by the migration policies of the governments concerned. Because it is a function of so many variables, it is impossible to predict. The assumption we make is that on an average over the next 25 years the number of immigrants entering the country will exceed the number of those emigrating by no less than 50,000 a year and probably by no more than 100,000, with the likelihood being that annual net immigration may run at about 75,000. This would compare with an average annual rate of net immigration of approximately 50,000 over the ten-year period from 1945 to 1955 and of approximately 110,000 over the four-year period from 1951 to 1955. Although only

one set of assumptions has been used for mortality and fertility rates, alternative forecasts of population are presented based on these three assumptions about net immigration. The difference that is made to the forecasts by these assumptions is demonstrated by the fact that, if net immigration runs at an annual rate of 75,000, the population of Canada by 1980, according to our estimates, will be 2,500,000 more than if it were augmented by natural increase alone. On the assumption that net immigration will be about 75,000 persons per annum, the estimated population of Canada can be summarized as follows:

Table 1

SUMMARY FORECAST OF THE POPULATION OF CANADA

Assumed Net Immigration — 75,000 per annum

1955.....	15,575,000 persons
1960.....	17,505,000
1965.....	19,515,000
1970.....	21,640,000
1975.....	23,990,000
1980.....	26,650,000

7. Tables V to VII present our estimates for the labour force, based on the assumption that net immigration will be 75,000 persons per annum. As defined by the Dominion Bureau of Statistics, the labour force includes all those 14 years and over (with the exception of those in the armed forces, in hospitals, jails, or other institutions, or on Indian reserves) who are employed or looking for work. Over the past decade the labour force has not been growing so fast as the population as a whole. The reason for this is that its size depends on the varying proportions of males and females in the various age groups who are members of the labour force. Important trends are discernible in these so-called membership rates. The most important is that the proportion of women in the labour force has been increasing; and we expect this trend to continue. Offsetting this has been a decline in the proportion of males in the younger age groups entering the labour force, and also a trend towards the earlier retirement of males in the older age groups. The trend towards later entry in the labour force we expect to continue; but we anticipate that the decrease in the proportion of those 65 years and over still in the labour force will flatten out as the elderly become a larger proportion of the total population and as medical progress keeps them in better health.

8. The size of the labour force is obviously one of the determinants of our estimate of the total output of the economy. In addition, output is affected by the proportion of the labour force that, on the average, is unemployed; by average hours worked per week; and most significantly by output per man-hour. We are assuming that unemployment will not be

relatively higher on the average over the next 25 years than it has been over the last five years. Thus we assume that the average level of unemployment will be 3% of the labour force. Hours of work, both in agriculture and in the business sector of the economy, have been declining and we expect these trends to continue. Average hours per week per man in agriculture are predicted to fall from 55.3 in 1955 to 43.75 in 1980 and, in business, to fall from 41.3 in 1955 to 34.3 in 1980.

9. The assumptions we make about productivity are more crucial and need a little more explanation. In brief, we predict that output per man-hour in agriculture will increase at an average rate of 3% compounded annually until 1970 and for the next ten years until 1980 at an average rate of 2.5% compounded annually. For the business sector of the economy we predict that output per man-hour will increase at a rate somewhere between 2.5% and 3.25% compounded annually. The importance of these productivity assumptions for our forecasts of the Gross National Product in 1980 is shown by the fact that, if the lower figure is taken for the rate of productivity increase in the business sector of the economy, the Gross National Product in 1980 would be almost \$10 billion less than if the higher figure were taken. The reason why the rate of productivity increase is so important and so difficult to forecast is that it measures the contribution of a great number of factors in the economic process. It reflects not only the application of new capital and new techniques but also the skill and effectiveness of individual members of the labour force and the contribution made by managerial competence.

10. Output per man-hour has been increasing more rapidly in agriculture than in any other part of the economy, although it is still considerably lower than in most other sectors. An important reason for the rapid increase has been the mechanical revolution that has been taking place in Canadian farming. Since it seems that this revolution is not yet complete, we are assuming that productivity in agriculture will continue to increase over the next 15 years at a high rate, although not so remarkably as has been the case during the past decade. There will of course be other technological advances made in agriculture; and for that reason we are also assuming a substantial rise in productivity during the last ten years of the period under consideration. But in our opinion the rate of increase will be somewhat slower because the production of meat will become relatively more important towards the end of the forecast period and it is impossible to apply mechanical methods to it to the same extent as to grain growing.

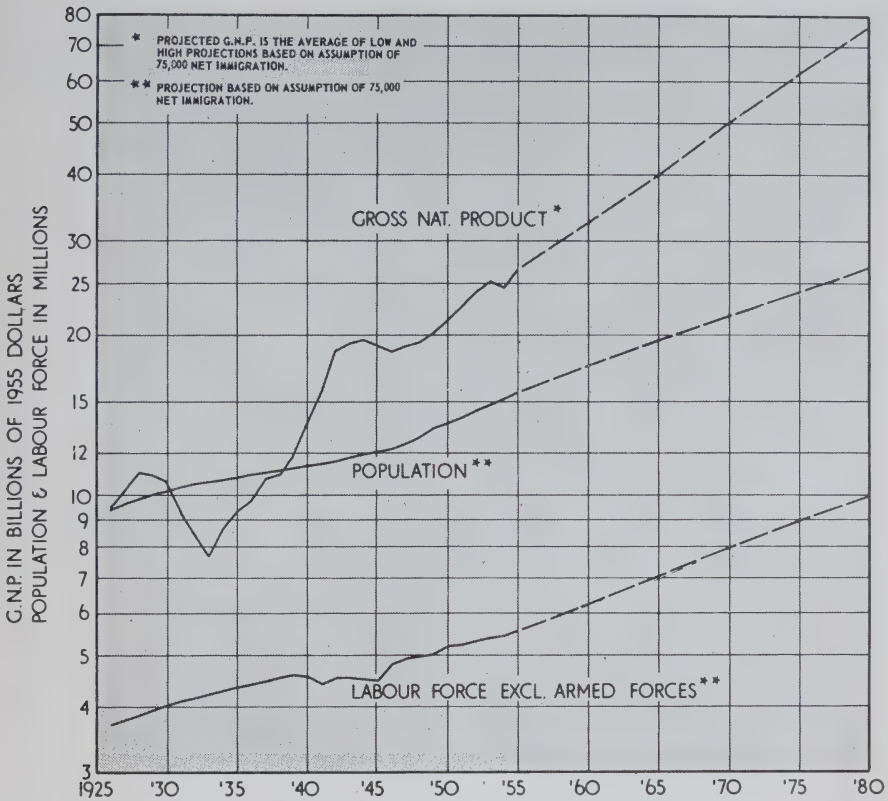
11. Our guesses about the rate of productivity increase in the business sector of the economy are optimistic and may prove to be unjustifiably high. They are based, however, on consideration of the rates that have been experienced in Canada since the end of the war. Between 1947 and 1955, productivity in the private business sector of the economy increased

at a compound rate of 2.45% per annum. From 1951 to 1953 the rate of increase was 3.24% per annum. It will be seen that the range of 2.5% to 3.25% which we have chosen for the annual rate of productivity increase in the business sector of the economy fits fairly well within those figures for the recent past. We have chosen to tie our assumptions about future productivity gains to the figures for increasing productivity in the postwar period partly because such recent figures are more statistically reliable and partly because it seemed natural to expect that future experience would probably approximate more closely the experience of the recent past than that of earlier periods. In justification of this view, we should add that we expect the accelerated pace of technological change that has been experienced recently to continue. We do not intend to imply by the range we have chosen that the rate of productivity increase in Canada will be substantially different from that in the United States; rather we feel that the rates of productivity increase that have been used in recent forecasts of the growth of the United States economy have been too low.

12. Table VIII presents our forecasts for the Gross National Product. If net immigration averages 75,000 per annum and if the rate of productivity increase in the private business sector of the economy hews to the midpoint of the range we have chosen, the Gross National Product in 1980 will amount to approximately \$76 billion in terms of 1955 dollars. If, however, net immigration on the average runs at only 50,000 per annum, and if the rate of productivity increase in the business sector hugs the lower edge of the range, Gross National Product in 1980 will amount to \$68 billion. If, on the other hand, net immigration runs on the average at 100,000 per annum, and if the rate of productivity increase is as high as 3.25% per annum in the business sector of the economy, Gross National Product in constant dollar terms will reach \$85 billion by 1980. There is thus a margin of error of somewhat over 10% on either side of our median forecast. In general it seems possible that Gross National Product may triple in real terms over the next quarter century. The chart on the opposite page shows the anticipated growth of the Gross National Product together with that of the population and the labour force.

13. Table IX indicates the estimated growth of per capita Gross National Product from 1955 to 1980. To deduce from these estimates what the growth is likely to be in per capita personal disposable income would necessitate making a number of assumptions about the tax structure which might or might not prove accurate. The estimates in this table, however, are consistent with the conclusion reached in the study made for us on *Consumption Expenditures in Canada* that by 1980 the average Canadian, after paying income tax, will have about two-thirds again as much net income for his own use as he had in 1955.

GROSS NATIONAL PRODUCT — POPULATION AND LABOUR FORCE
Semi-logarithmic scale
1926-1980



14. Table X suggests how the output produced in 1980 will be distributed between the various sectors of the economy. It will be seen that we expect net agricultural output to decline in round numbers from 13% to 6% of the total. Over the same period the net output of the resource industries, including mining, logging, fishing and electric power, will increase in relative importance from 10% to 15%. The proportion accounted for by the primary manufacturing industries will, in all probability, remain fairly constant. On the other hand, the secondary manufacturing industries will increase somewhat in relative importance, accounting in 1980 for 25% of total output instead of the 22% that they account for today. The figure given in the table for the output of those engaged in government and community services should not be taken as an indication of the role that we expect such activities to play in the economy two or three decades hence, since, for technical reasons inherent in the way statistics about these activities are compiled, it has had to be assumed that the productivity of those engaged in them will be constant.

15. In Table XI the anticipated labour force is distributed among the various sectors of the economy. It appears from this table that we expect the resource industries, primary and secondary manufacturing, and construction to employ roughly the same proportions of the labour force as they do today. The labour force in agriculture has been declining not only in relative but also in absolute terms; and we expect that trend to continue. While agriculture now accounts for some 15% of the total labour force, by 1980 its share may have declined to 7%. On the other hand, there will be a marked increase in the number of workers employed in the tertiary or service sectors of the economy, so that over the next 25 years the labour force employed in civilian government and community services, in transportation, storage and communications, and in trade, finance and other services will increase from 47% to 55%.

16. The importance of the service industries as sources of employment will be evident from those percentages. It seems to be a general rule that as a country matures economically the share of its labour force engaged in the tertiary or service industries tends to increase. Canada is no exception to this rule, for the proportion of our labour force employed in the service industries has risen steadily since Confederation. The number of people employed in the service industries has increased from under 500,000 in 1901 to about 1,200,000 in 1926, 1,550,000 in 1939 and 2,500,000 in 1955. The principal factors contributing to the development of the service industries are the growth in population, industry and urbanization; the rise in standards of living, incomes and leisure; the increased specialization of employment and the greatly increased demands for government and community services. It is difficult to mechanize to any high degree the operations of many of the service industries, although the growth of supermarkets, laundromats and mechanized banking and insurance transactions indicates that it may not be impossible in others. In fact, however, the gains in labour productivity have been quite slow compared to the commodity-producing industries. This of course is one of the principal reasons why employment in the services sector has been rising so quickly. We believe that these trends will continue and that by 1980 nearly 5,500,000 people or about 55% of the civilian labour force will be employed in the service industries.

17. Canada has been becoming an increasingly urban country and this trend will continue, as is suggested by Table XII, which provides a breakdown of the anticipated population between urban and rural areas. In 1951, 62% of the population lived in metropolitan areas or in other cities, towns or villages with more than a thousand people. By 1980 that proportion may rise to 80%. Over the same period the proportion of the population living in metropolitan and urban areas of more than 100,000 people may rise from 36% to 56%. In our final report we will

also present some estimates on how the total population will be distributed between the various regions in Canada.

18. We will also have a good deal to say in that report about the prospects for Canada's foreign trade. Canada for many years has been one of the principal trading countries of the world and for as long as can be foreseen foreign trade will be an extremely important determinant of the growth and prosperity of the Canadian economy. However, since the nineteen-thirties there has been a perceptible decline in the value of Canada's exports of goods and services as a proportion of Gross National Expenditure. In 1938, for example, such exports accounted for approximately 26% of the total, whereas in 1955 the proportion had fallen to approximately 21%. During the same period there occurred a significant reorientation of our export trade towards the United States. In 1938 the United States took approximately 32% of our merchandise exports, whereas in 1955 it took approximately 60%. Meanwhile, the percentage of our imports coming from the United States rose from 63% to 73%. We are inclined to believe that both these broad trends will persist, and that although foreign trade will continue to be very important for Canada, it will probably decline somewhat further in relative importance for the economy as a whole. At the same time the proportion both of our exports going to the United States and of our imports coming from that source will probably increase.

Table II

FORECASTS OF THE POPULATION OF CANADA

Assumed Net Immigration — 50,000 per annum

(thousands of persons)

1955

(Actual at June 1)

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
0-9	1870	23.7%	1790	23.3%	3660	23.5%
10-19	1265	16.0	1215	15.8	2480	15.9
20-29	1155	14.7	1145	14.9	2300	14.8
30-39	1105	14.1	1125	14.6	2230	14.3
40-49	935	11.8	895	11.6	1830	11.7
50-59	690	8.7	655	8.6	1345	8.6
60-69	495	6.3	480	6.2	975	6.3
70 and over	370	4.7	385	5.0	755	4.9
Totals	7885	100.0%	7690	100.0%	15575	100.0%

FORECASTS OF THE POPULATION OF CANADA

(Continued)

Assumed Net Immigration — 50,000 per annum

(thousands of persons)

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
1960						
0-9	2075	23.6%	1985	23.1%	4060	23.4%
10-19	1560	17.8	1495	17.5	3055	17.6
20-29	1160	13.2	1125	13.1	2285	13.2
30-39	1185	13.5	1200	14.0	2385	13.8
40-49	1045	12.0	1035	12.1	2080	12.0
50-59	785	8.9	750	8.7	1535	8.8
60-69	530	6.0	535	6.2	1065	6.2
70 and over	440	5.0	460	5.3	900	5.1
Totals	8780	100.0%	8585	100.0%	17365	100.0%
1965						
0-9	2180	22.5%	2080	21.9%	4260	22.2%
10-19	1890	19.5	1810	19.0	3700	19.3
20-29	1305	13.4	1250	13.2	2555	13.3
30-39	1225	12.6	1205	12.7	2430	12.6
40-49	1125	11.6	1145	12.0	2270	11.8
50-59	900	9.3	880	9.2	1780	9.3
60-69	595	6.1	605	6.4	1200	6.2
70 and over	485	5.0	535	5.6	1020	5.3
Totals	9705	100.0%	9510	100.0%	19215	100.0%
1970						
0-9	2305	21.6%	2200	21.0%	4505	21.3%
10-19	2100	19.7	2015	19.2	4115	19.4
20-29	1600	15.0	1530	14.6	3130	14.8
30-39	1240	11.6	1185	11.3	2425	11.5
40-49	1205	11.3	1220	11.6	2425	11.5
50-59	1005	9.4	1015	9.7	2020	9.5
60-69	680	6.4	695	6.7	1375	6.5
70 and over	540	5.0	625	5.9	1165	5.5
Totals	10675	100.0%	10485	100.0%	21160	100.0%

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
1975						
0-9	2535	21.5%	2410	20.8%	4945	21.2%
10-19	2210	18.8	2110	18.2	4320	18.5
20-29	1930	16.4	1845	16.0	3775	16.2
30-39	1380	11.7	1315	11.4	2695	11.6
40-49	1250	10.6	1220	10.6	2470	10.6
50-59	1080	9.2	1120	9.7	2200	9.4
60-69	775	6.6	820	7.1	1595	6.8
70 and over	600	5.2	715	6.2	1315	5.7
Totals	11760	100.0%	11555	100.0%	23315	100.0%

1980						
0-9	2855	22.0%	2715	21.2%	5570	21.6%
10-19	2330	17.9	2225	17.4	4555	17.7
20-29	2140	16.5	2050	16.0	4190	16.3
30-39	1675	12.9	1595	12.5	3270	12.7
40-49	1265	9.7	1215	9.5	2480	9.6
50-59	1160	9.0	1200	9.4	2360	9.1
60-69	865	6.7	955	7.4	1820	7.1
70 and over	690	5.3	835	6.6	1525	5.9
Totals	12980	100.0%	12790	100.0%	25770	100.0%

Table III

FORECASTS OF THE POPULATION OF CANADA

Assumed Net Immigration — 75,000 per annum

*(thousands of persons)***1955***(Actual at June 1)*

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
0-9	1870	23.7%	1790	23.3%	3660	23.5%
10-19	1265	16.0	1215	15.8	2480	15.9
20-29	1155	14.7	1145	14.9	2300	14.8
30-39	1105	14.1	1125	14.6	2230	14.3
40-49	935	11.8	895	11.6	1830	11.7
50-59	690	8.7	655	8.6	1345	8.6
60-69	495	6.3	480	6.2	975	6.3
70 and over	370	4.7	385	5.0	755	4.9
Totals	7885	100.0%	7690	100.0%	15575	100.0%

POPULATION FORECASTS — Continued

(Net Immigration 75,000 per annum)

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
1960						
0-9	2085	23.6%	1995	23.1%	4080	23.3%
10-19	1570	17.7	1505	17.4	3075	17.6
20-29	1180	13.3	1140	13.2	2320	13.3
30-39	1205	13.6	1215	14.1	2420	13.8
40-49	1055	11.9	1045	12.0	2100	12.0
50-59	790	8.9	750	8.7	1540	8.8
60-69	530	6.0	540	6.2	1070	6.1
70 and over	440	5.0	460	5.3	900	5.1
Totals	8855	100.0%	8650	100.0%	17505	100.0%
1965						
0-9	2215	22.4%	2110	21.9%	4325	22.2%
10-19	1910	19.3	1825	18.9	3735	19.1
20-29	1330	13.5	1270	13.2	2600	13.3
30-39	1270	12.9	1240	12.8	2510	12.9
40-49	1150	11.7	1160	12.0	2310	11.8
50-59	910	9.2	890	9.2	1800	9.2
60-69	595	6.1	615	6.4	1210	6.2
70 and over	485	4.9	540	5.6	1025	5.3
Totals	9865	100.0%	9650	100.0%	19515	100.0%
1970						
0-9	2365	21.6%	2255	21.0%	4620	21.3%
10-19	2135	19.5	2045	19.1	4180	19.3
20-29	1635	15.0	1560	14.6	3195	14.8
30-39	1300	11.9	1235	11.5	2335	11.7
40-49	1250	11.4	1250	11.7	2500	11.5
50-59	1025	9.4	1030	9.7	2055	9.5
60-69	685	6.3	705	6.5	1390	6.4
70 and over	540	4.9	625	5.9	1165	5.5
Totals	10935	100.0%	10705	100.0%	21640	100.0%
1975						
0-9	2610	21.5%	2480	20.9%	5090	21.2%
10-19	2265	18.7	2160	18.2	4425	18.4
20-29	1975	16.3	1880	15.9	3855	16.1
30-39	1450	12.0	1370	11.5	2820	11.8
40-49	1320	10.9	1270	10.7	2590	10.8
50-59	1115	9.1	1145	9.7	2260	9.4
60-69	785	6.5	835	7.0	1620	6.8
70 and over	605	5.0	725	6.1	1330	5.5
Totals	12125	100.0%	11865	100.0%	23990	100.0%

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
1980						
0-9	2950	21.9%	2800	21.2%	5750	21.6%
10-19	2405	17.9	2300	17.4	4705	17.6
20-29	2200	16.3	2100	15.9	4300	16.1
30-39	1755	13.1	1655	12.6	3410	12.8
40-49	1350	10.0	1280	9.7	2630	9.9
50-59	1210	9.0	1245	9.4	2455	9.2
60-69	885	6.6	975	7.4	1860	7.0
70 and over	695	5.2	845	6.4	1540	5.8
Totals	13450	100.0%	13200	100.0%	26650	100.0%

Table IV

FORECASTS OF THE POPULATION OF CANADA

Assumed net Immigration — 100,000 per annum

*(thousands of persons)***1955***(Actual at June 1)*

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
0-9	1870	23.7%	1790	23.3%	3660	23.5%
10-19	1265	16.0	1215	15.8	2480	15.9
20-29	1155	14.7	1145	14.9	2300	14.8
30-39	1105	14.1	1125	14.6	2230	14.3
40-49	935	11.8	895	11.6	1830	11.7
50-59	690	8.7	655	8.6	1345	8.6
60-69	495	6.3	480	6.2	975	6.3
70 and over	370	4.7	385	5.0	755	4.9
Totals	7885	100.0%	7690	100.0%	15575	100.0%

1960

0-9	2100	23.5%	2010	23.1%	4110	23.3%
10-19	1580	17.6	1510	17.3	3090	17.5
20-29	1200	13.4	1150	13.2	2350	13.3
30-39	1225	13.7	1235	14.2	2460	13.9
40-49	1070	12.0	1050	12.0	2120	12.0
50-59	790	8.9	755	8.7	1545	8.8
60-69	530	6.0	545	6.2	1075	6.1
70 and over	440	4.9	460	5.3	900	5.1
Totals	8935	100.0%	8715	100.0%	17650	100.0%

POPULATION FORECASTS — Continued

(Net Immigration 100,000 per annum)

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
1965						
0-9	2250	22.5%	2145	21.9%	4395	22.1%
10-19	1930	19.2	1845	18.9	3775	19.1
20-29	1360	13.5	1290	13.2	2650	13.4
30-39	1315	13.1	1275	13.0	2590	13.0
40-49	1175	11.7	1180	12.1	2355	11.9
50-59	920	9.2	895	9.2	1815	9.1
60-69	600	5.9	620	6.3	1220	6.2
70 and over	485	4.9	540	5.4	1025	5.2
Totals	10035	100.0%	9790	100.0%	19825	100.0%
1970						
0-9	2425	21.6%	2305	21.1%	4730	21.3%
10-19	2170	19.4	2070	19.0	4240	19.2
20-29	1670	14.9	1590	14.5	3260	14.8
30-39	1365	12.2	1285	11.8	2650	12.0
40-49	1295	11.6	1285	11.7	2580	11.6
50-59	1045	9.3	1050	9.6	2095	9.5
60-69	690	6.2	715	6.5	1405	6.3
70 and over	540	4.8	630	5.8	1170	5.3
Totals	11200	100.0%	10930	100.0%	22130	100.0%
1975						
0-9	2685	21.5%	2555	21.0%	5240	21.2%
10-19	2320	18.6	2210	18.1	4530	18.4
20-29	2020	16.2	1920	15.7	3940	16.0
30-39	1525	12.2	1425	11.7	2950	12.0
40-49	1390	11.1	1320	10.8	2710	10.9
50-59	1145	9.1	1170	9.7	2315	9.4
60-69	800	6.4	845	7.0	1645	6.7
70 and over	605	4.9	730	6.0	1335	5.4
Totals	12490	100.0%	12175	100.0%	24665	100.0%
1980						
0-9	3040	21.8%	2890	21.2%	5930	21.5%
10-19	2475	17.8	2375	17.4	4850	17.6
20-29	2260	16.2	2150	15.8	4410	16.0
30-39	1835	13.2	1720	12.6	3555	12.9
40-49	1440	10.4	1345	9.9	2785	10.1
50-59	1265	9.1	1285	9.5	2550	9.3
60-69	905	6.5	995	7.3	1900	6.9
70 and over	700	5.0	855	6.3	1555	5.7
Totals	13920	100.0%	13615	100.0%	27535	100.0%

Table V

FORECASTS OF THE MALE CIVILIAN LABOUR FORCE

Assumed Net Immigration — 75,000 per annum

(thousands of persons)

		Age					
		14 - 19	20 - 24	25 - 44	45 - 64	65 +	Total
1955	Civ. non-inst. pop. 14 + ¹	670	515	2110	1365	585	5245
	Membership rate	48.6%	92.3%	97.5%	91.7%	32.4%	82.0%
	In labour force	325	475	2060	1250	190	4300
	Not in labour force	345	40	50	115	395	945
1960	Civ. non-inst. pop. 14 + ¹	860	540	2265	1555	660	5880
	Membership rate	49.0%	91.8%	97.5%	92.0%	32.5%	81.1%
	In labour force	420	495	2210	1430	215	4770
	Not in labour force	440	45	55	125	445	1110
1965	Civ. non-inst. pop. 14 + ¹	1015	660	2395	1775	730	6575
	Membership rate	48.2%	91.4%	97.5%	92.0%	32.0%	80.5%
	In labour force	490	605	2335	1635	235	5300
	Not in labour force	525	55	60	140	495	1275
1970	Civ. non-inst. pop. 14 + ¹	1175	845	2610	1975	815	7420
	Membership rate	47.4%	91.0%	97.5%	92.0%	31.5%	80.1%
	In labour force	560	770	2545	1815	255	5945
	Not in labour force	615	75	65	160	560	1475
1975	Civ. non-inst. pop. 14 + ¹	1225	1000	2945	2180	925	8275
	Membership rate	46.6%	90.6%	97.5%	92.0%	31.0%	80.2%
	In labour force	570	905	2870	2005	285	6635
	Not in labour force	655	95	75	175	640	1640
1980	Civ. non-inst. pop. 14 + ¹	1310	1070	3430	2330	1060	9200
	Membership rate	45.8%	90.2%	97.5%	92.0%	30.5%	80.2%
	In labour force	600	965	3345	2145	325	7380
	Not in labour force	710	105	85	185	735	1820

¹ Civilian Non-Institutional Population aged 14 and over.

Table VI

FORECASTS OF THE FEMALE CIVILIAN LABOUR FORCE

Assumed Net Immigration — 75,000 per annum

(thousands of persons)

		Age				
		14 - 19	20 - 24	25 - 44	45 - 64	65 +
1955	Civ. non-inst. pop. 14 + ¹	665	540	2190	1305	580
	Membership rate	32.9%	46.3%	23.7%	18.8%	3.9%
	In labour force	220	250	520	245	20
	Not in labour force	445	290	1670	1060	560
1960	Civ. non-inst. pop. 14 + ¹	810	555	2325	1515	685
	Membership rate	33.0%	46.0%	25.2%	20.0%	4.0%
	In labour force	270	255	585	305	25
	Not in labour force	540	300	1740	1210	660
1965	Civ. non-inst. pop. 14 ¹	1030	675	2410	1755	800
	Membership rate	32.4%	46.0%	26.5%	21.5%	4.0%
	In labour force	335	310	640	375	30
	Not in labour force	695	365	1770	1380	770
1970	Civ. non-inst. pop. 14 + ¹	1180	845	2565	2000	920
	Membership rate	31.8%	46.0%	27.8%	22.9%	4.0%
	In labour force	375	390	710	460	35
	Not in labour force	805	455	1855	1540	885
1975	Civ. non-inst. pop. 14 + ¹	1245	995	2840	2240	1070
	Membership rate	31.2%	46.0%	29.2%	24.3%	4.0%
	In labour force	390	460	830	545	45
	Not in labour force	855	535	2010	1695	1025
1980	Civ. non-inst. pop. 14 + ¹	1300	1060	3305	2380	1265
	Membership rate	30.6%	46.0%	30.6%	25.7%	4.0%
	In labour force	400	485	1010	610	50
	Not in labour force	900	575	2295	1770	1215

¹ Civilian Non-Institutional Population aged 14 and over.

Table VII

FORECASTS OF THE TOTAL CIVILIAN LABOUR FORCE

Assumed Net Immigration — 75,000 per annum

(thousands of persons)

		Age					
		14 - 19	20 - 24	25 - 44	45 - 64	65+	Total
1955	Civ. non-inst. pop. 14 + ¹	1335	1055	4310	2670	1165	10525
	Membership rate	40.8%	68.7%	60.0%	56.0%	18.0%	52.8%
	In labour force	545	725	2580	1495	210	5555
	Not in labour force	790	330	1720	1175	955	4970
1960	Civ. non-inst. pop. 14 + ¹	1670	1095	4590	3070	1345	11770
	Membership rate	41.3%	68.5%	60.9%	56.5%	17.9%	52.8%
	In labour force	690	750	2795	1735	240	6210
	Not in labour force	980	345	1795	1335	1105	5560
1965	Civ. non-inst. pop. 14 + ¹	2045	1335	4805	3530	1530	13245
	Membership rate	40.2%	68.5%	61.9%	56.9%	17.4%	52.7%
	In labour force	825	915	2975	2010	265	6990
	Not in labour force	1220	420	1830	1520	1265	6255
1970	Civ. non-inst. pop. 14 + ¹	2355	1690	5175	3975	1735	14930
	Membership rate	39.6%	68.5%	62.9%	57.2%	16.9%	53.0%
	In labour force	935	1160	3255	2275	290	7915
	Not in labour force	1420	530	1920	1700	1445	7015
1975	Civ. non-inst. pop. 14 + ¹	2470	1995	5785	4420	1995	16665
	Membership rate	38.8%	68.3%	64.0%	57.7%	16.5%	53.4%
	In labour force	960	1365	3700	2550	330	8905
	Not in labour force	1510	630	2085	1870	1665	7760
1980	Civ. non-inst. pop. 14 + ¹	2610	2130	6735	4710	2325	18510
	Membership rate	38.2%	68.2%	64.7%	58.5%	16.1%	53.7%
	In labour force	1000	1450	4355	2755	375	9935
	Not in labour force	1610	680	2380	1955	1950	8575

¹ Civilian Non-Institutional Population aged 14 and over.

Table VIII

FORECASTS OF THE GROSS NATIONAL PRODUCT

(Billions of constant 1955 dollars)

	Assumed Net Immigration		
	50,000 per annum	75,000 per annum	100,000 per annum
Productivity factor			
2½% ¹			
1965.....	38.0	38.7	39.5
1970.....	46.7	48.0	49.3
1975.....	56.3	58.2	60.2
1980.....	67.7	70.3	73.0
Productivity factor			
3¼% ¹			
1965.....	40.2	41.1	41.8
1970.....	50.9	52.4	53.9
1975.....	63.5	65.7	67.9
1980.....	78.9	82.0	85.2
Average of the above			
1965.....	39.1	39.9	40.7
1970.....	48.8	50.2	51.6
1975.....	59.9	62.0	64.0
1980.....	73.3	76.1	79.1

¹ Assumed rate of productivity increase per annum for the business sector.

Note: In 1955, the Gross National Product was \$26.8 billion.

Table IX

FORECASTS OF PER CAPITA GROSS NATIONAL PRODUCT

Assumed Net Immigration — 75,000 per annum

Average between the high and low projections

(1955 dollars)

	Per Capita Gross National Product	
	Dollars	Index (1955 = 100)
1955.....	1714	100
1965.....	2044	119
1970.....	2320	135
1975.....	2584	151
1980.....	2859	167

Table X

**FORECAST OF DISTRIBUTION OF TOTAL OUTPUT¹
AMONG THE VARIOUS SECTORS OF THE ECONOMY**

	1955 (Actual) Percent	1980 (Forecast) Percent
Agriculture.....	12.8%	5.7%
Resource industries (forestry, fishing and trapping, mining, electric light and power)...	9.9	15.4
Primary manufacturing ²	7.3	7.2
Secondary manufacturing.....	21.6	25.3
Construction.....	6.5	5.6
Civilian government and community services...	10.1	8.0
Transport, storage and communications.....	8.1	32.8
Trade, finance and services.....	23.7	
	} 31.8	
Total.....	100.0%	100.0%

¹ The measure of output used for the purposes of this table is Gross Domestic Product at factor cost.

² The distinction we have drawn between primary and secondary manufacturing is explained at the beginning of Section 10.

Table XI

**FORECAST OF DISTRIBUTION OF TOTAL EMPLOYED CIVILIAN
LABOUR FORCE AMONG THE VARIOUS SECTORS
OF THE ECONOMY**
(thousands of persons)

	1955 (Actual)		1980 (Forecast)	
	Numbers	Percent	Numbers	Percent
Agriculture.....	817	15.3%	735	7.6%
Resource industries.....	297	5.6	555	5.8
Primary manufacturing.....	313	5.9	486	5.0
Secondary manufacturing...	1049	19.7	1907	19.8
Construction.....	367	6.9	625	6.5
Civilian government and community services.....	664	12.5	1439	14.9
Transport, storage and communications.....	401	7.5	3890	40.4 ¹
Trade, finance and services...	1420	26.6		
		} 34.1%	}	
Total.....	5328	100.0%	9637	100.0%

¹ Although statistics are available to show employment in past years in transport, storage and communications, and in trade, finance and services, we have not found it possible to forecast employment in these sectors separately.

Table XII

FORECASTS OF URBAN-RURAL DISTRIBUTION OF POPULATION

Assumed Net Immigration — 75,000 per annum

(thousands of persons)

	1951 (Actual)		1980 (Forecast)	
	Numbers	Percent	Numbers	Percent
15 Metropolitan Areas ¹	5,190	37%	12,000	45%
Other Urban	3,432	25	9,010	34
Total Urban	8,622	62	21,010	79
Rural Non-Farm	2,534	18	3,294	12
Rural Farm	2,827	20	2,346	9
Total Rural	5,361	38	5,640	21
Total Population of Canada (excluding Yukon and N.W.T.)	13,984	100%	26,650	100%

¹ These are the areas designated as metropolitan areas in the 1951 census. (i.e. Montreal, Toronto, Vancouver, Winnipeg, Ottawa, Hamilton, Quebec City, Edmonton, Windsor, Calgary, Halifax, London, Victoria, Saint John and St. John's.)

AGRICULTURE

1. GREAT changes have taken place in Canadian agriculture since the end of the last war. Between 1946 and 1955 the physical volume of output per farm has increased by 30% and gross physical output per man-hour by almost 75%. This greater productivity has been made possible in part by favourable weather conditions in Western Canada and, in part, by substantial increases in the use of power and equipment on farms. At the same time, the number employed in agriculture dropped by about 30% from 1,186,000 to 817,000. In 1946, 25% of the total number of gainfully employed people was engaged in agriculture; by 1955, the proportion had dropped to 15%. Because the area of occupied farm land is only determined at the time of the decennial census, it is not possible to measure the change in occupied farm land over the same period; but, from 1941 to 1951, there was a very slight increase in the total area of occupied farm land in Canada.

2. Over a long period of time the average incomes of agricultural workers (farmers, family labour and hired labour) were generally lower than the incomes of other producers, except for fishermen. But during the last ten years, the real earnings of agricultural workers have improved considerably, both absolutely and in comparison with the earnings of workers in other occupations. This improvement has resulted from the higher level of domestic demand for agricultural products, increased productivity on farms, the movement off the farms of redundant farm labor, and in some situations a growth in supplementary off-farm earnings.

3. Incomes per farm have also increased in the postwar period. However, in some parts of the country the average income per farm has been considerably lower than in others. Farm incomes are also characterized by wide fluctuations due to weather conditions and to the necessarily slow response of agricultural production to changes in demand for farm products.

4. The directions of change in the next 25 years can be expected to follow the broad trends evident in recent experience. Although a major part of the

reorganization appears to be over, further adjustments to mechanical techniques will occur. In the process of adjustment land has gone out of agriculture in eastern Canada and farms have been enlarged in western Canada. Both these changes are expected to continue, particularly over the next ten years or so. Beyond that time the influences changing the structure of the industry may be more related to the rise in the domestic demand for food, especially for red meats, poultry meats and eggs.

5. In the first half of the 25 year period, agricultural output will continue to shift in emphasis towards livestock products as it has been doing; but the greatest changes will be those involved in the adjustment between man and machine. Farms will continue to become larger and the labour force will become smaller. The increases in output required to meet the rise in domestic demand for food envisaged by 1965 are not large and do not appear to require much intensification of present land use. However, at some time between 1965 and 1970, the growth in population coupled, as incomes rise, with the preference for superior foods, will begin to have a decided impact both on the pattern of agricultural output and on the structural organization of farming.

6. The magnitudes of the changes which may be expected, in both the shorter and longer periods, are reflected in the following table taken from the Commission's study *Progress and Prospects of Canadian Agriculture*.

Table XIII

RELATIVE TRENDS IN CERTAIN ASPECTS OF AGRICULTURAL ORGANIZATION

(Base = 1951 as 100, except for index of physical volume of production based on the average of 1947 - 55)

	1951	1965	1980
Farm size	100	110	116
Number of farms	100	91	87
Labour per farm	100	84	86
Physical volume of livestock production per farm	100	137	212
1947-55			
Physical volume of all production per farm	100	130	185

7. In the latter half of the 25 year period, intensification of land use will become increasingly evident. Demand will continue to rise for foods which can be produced profitably within a more intensive pattern of land use than is presently practised in Canada. This will be true as farmers move toward more meat production and higher output of poultry and eggs. Furthermore, new lands are no longer available in localities where they could be developed easily at low cost; the cost of providing the social services which are now demanded in rural areas makes it seem more

unlikely, particularly in the Prairie Provinces, that much new land will be brought into cultivation. However, the level of demand is likely to be high enough to make it profitable for some farmers in the Prairie Provinces to take land now in summer fallow and put it into some form of fodder rotation. Other farmers, in all parts of the country, are likely to increase the carrying capacity of pasture land. The influence of intensification will probably be seen in a distinct slowing down of the rate at which labour leaves the industry and in a decrease in the rate at which the number of farm businesses declines.

8. External demands for the products of Canadian agriculture are not expected to increase materially in the period under review. Similarly, it seems reasonable to assume that importations of agricultural products will not increase to a point where domestic producers would be seriously inconvenienced. The dynamic factors, therefore, in the agricultural picture will be further technological improvements, the anticipated growth of the domestic market and a continuation of the trend toward increasing consumption of meats; these factors, taken together, will result in substantially more hog raising, particularly on the Prairies, and in more cattle raising in all parts of Canada. The demand for dairy products, vegetables and certain other products will increase with the increase in population but at a slower rate than the demand for meats. The labour force employed in agriculture may continue to decline slightly in absolute terms. By 1980 the total number of people employed in agriculture may represent no more than 7% or 8% of the much larger labour force which is forecast by that time.

9. Settlement policies designed to bring more land under cultivation were essential in the early days; and other programmes with the purpose of inducing expansion of production may have been appropriate. Under the conditions of today and of the near future such policies and programmes would tend to have a depressing effect on farm prices and incomes. We suggest that substantial irrigation projects, while desirable from the standpoint of local areas, could be harmful rather than helpful to farmers in the aggregate. At some time in the future, extensive irrigation schemes, settlement plans, and programmes designed to expand production may be desirable; in the near term we believe that the funds which would be necessary for these purposes could be better used in other ways.

10. Considerable success has been achieved in the Prairie Provinces since the 1930's with assistance provided under the Prairie Farm Rehabilitation Act, in moving people off unproductive land and relocating them in new areas more suitable for farming purposes. This constructive programme has now been largely completed insofar as the Prairies are concerned. Assistance has been provided also under the Prairie Farm Assistance Act to farmers who live in areas where crop failures have occurred from time to time. This also has been a useful programme. However, there might be merit in imposing some limit upon the number of years in which payments could

be made under this Act to people who persist in farming lands which have a high record of crop failures over a term of years. If this were done, assistance should be offered to those people who might be willing to re-establish themselves elsewhere.

11. Similar problems exist in certain of the Atlantic Provinces, although the best way of dealing with them may vary from one area to another. In some parts of Nova Scotia, for example, where farm incomes are very low, the best approach might be some combination of farming with the intensive cultivation of enlarged woodlots. Speaking generally, any successful plan for raising farm incomes in Nova Scotia, and probably in New Brunswick and Prince Edward Island as well, will have to include provision for a consolidation of holdings (where this is possible, having regard to the terrain) and assistance to those people who may be willing to move into other occupations. It seems unlikely that it will be possible for farmers in this part of the country to increase their incomes appreciably unless in some way they can obtain additional land or other resources. We suggest that if the people and the governments of Nova Scotia, New Brunswick and Prince Edward Island are interested in co-operating in such a plan, the federal government should assist the governments of these three provinces in working out a better system of land use, including the provision of credit facilities to finance the consolidation of holdings and the provision of assistance, financial and otherwise, to people who may wish to be relocated and re-established in other industries. We suggest that in any such appraisal of the best land use in this area, particular attention be directed to increasing the forestry potential with a view to increasing the incomes of the people in this part of the country.

12. Particular reference has been made to three of the Atlantic Provinces where the problems resulting from low farm incomes are particularly acute. It is suggested that the federal government should co-operate in the same way with any other provinces where similar problems exist, provided they are assured of the co-operation of the provincial governments concerned.

13. Farm credit agencies may expect to experience an increase in the demand for loans for two purposes: first, long-term loans connected with the transfer of farm properties, often from father to son, and second, intermediate loans for capital expenditures required for efficient production with a changing technology. As long as farm incomes are relatively low and irregular, it is important that fixed annual payments be no larger than necessary. Appropriate rates of interest will vary from time to time, but annual payments can be reduced by extending the period of years over which the principal would be repaid. We believe that, in terms of farm income and the ability to service loans, the long-run prospects are favourable. Under these circumstances, farm credit agencies could appropriately extend the period of repayment up to 40 years for long-term loans and to five or six years for intermediate loans.

14. Marketing boards are now established in some provinces for all products except eggs, poultry, cattle and butter. The activities of some boards are limited to price negotiations; other boards undertake to grade, store and market the products of their members, in addition to negotiating prices. The proponents of farmers' marketing boards point out that other groups in the community, including both labour and industry, are organized on a large scale and that it will be increasingly necessary for farmers to organize in a similar manner. While some farmers and other people as well may object to the compulsory membership feature of these boards — without which they would soon become ineffective — the further growth of the co-operative movement and of compulsory co-operative marketing boards based on the will of the majority seems to be highly probable.

15. Many people are nervous about schemes for supporting agricultural prices because if the support prices are established at relatively high levels the tendency to overproduction on a substantial scale can only be avoided by rigid production controls. We appreciate that a need exists for a measure of stability in farm incomes. At the same time it must be recognized that any measures which result in over-production of particular commodities would be damaging to the economy and to the interests of farmers themselves. We believe that the objective of a price support programme for farmers should be roughly the same as that of unemployment assistance to industrial workers, namely, to mitigate distress due to economic fluctuations.

16. The principle of price supports as an emergency measure to alleviate distress was accepted by the federal government in 1944 with the enactment of the Agricultural Prices Support Act. In any price support programme the government can either purchase agricultural commodities when prices fall below the stated support level, or it can allow farmers to dispose of their products at the prevailing market prices, even though these may be below the support level, and then make up the difference by a series of deficiency payments. The latter procedure, while no doubt involving some problems in administration, avoids the difficulties which the government would otherwise face in disposing of surplus commodities. However, the best approach may be to authorize the price support authorities to use either measure from time to time, depending upon the circumstances of particular cases. There are also the difficult questions of how support prices should be determined and whether they should become effective according to the application of some automatic formula or in some other way. We believe that an effective price support programme should be administered by a separate board, the members of which should be relieved of other duties. Such a board should be able to develop and assemble the information required for sound decisions. It should become skilled in anticipating the occurrence of emergency conditions and in determining the effects of particular prices on production and on incomes. We believe that the determination of support prices on the advice of a full-time board would be preferable to the application of more or less automatic formulæ.

WHEAT

1. IT SEEMS clear from the evidence presented to us that the method of marketing wheat and coarse grains through the Canadian Wheat Board is well accepted and established and that majority opinion is strongly in favour of continuing it. Because of the agricultural policies of the wheat exporting and importing countries, and the various subsidies provided for the domestic production of wheat in these countries, there seems little evidence to support the contention that more Canadian wheat would be sold if the free market system were re-established. For one reason or another, and in one way or another, the governments in every important wheat producing country in the world influence or direct the operations of the growers or influence or direct the marketing of their product. Under these conditions, it would not make sense to leave Canadian wheat farmers and the Canadian wheat marketing and distributing trades to their own devices.
2. The surplus of wheat in Canada at present does not seem to have arisen out of the procedures used to market the crop. It has resulted primarily from weather conditions. The years 1950 to 1956 have been more favourable to wheat yields than any other similar period in our history. In other wheat producing regions in the world, there is fairly clear evidence of increasing yields brought about by techniques designed to increase output per acre. The same situation may be true to some extent in western Canada, although technical changes have operated primarily in the direction of increasing output per man. Their effect is not discernible in the record of yields per acre when due allowance is made for weather conditions. The effects of better seeds, better cultivation, better timing of cultivation and quicker harvesting seem to have been to offset tendencies to declining yields because of reduced fertility and other reasons rather than to bring about an increase.
3. The demand for Canadian wheat in world markets over a long period of years cannot be foreseen with any degree of certainty. It forms such a

substantial part of agricultural production and such an important part of Canadian exports, however, that we would be evading part of our task if we did not make some attempt at forecasting the market prospects. This is done at some length in the Commission's study *Progress and Prospects of Canadian Agriculture*. The estimates produced there are arrived at by making certain assumptions about the extent of world trade and of Canada's share in it. Since the war, the volume of world trade in wheat and flour has varied from 825 million bushels (1949) to 1,066 million bushels (1951), around an average of 925 million bushels annually (1945-54). We do not believe that, in the years immediately ahead, the high level of trade characteristic of the postwar years is likely to be sustained if normal trading practices are followed. However, over the next 25-year period, we expect that the volume will move gradually upward to a level of 950 million bushels. Since world surpluses have accumulated, the share of the market obtained by Canada has declined slightly. When the surplus position has been relieved, we expect that Canada will probably secure again the share she has obtained on the average since 1920, namely about 30%. Including some 120 million bushels per annum required for feed and seed and a slowly increasing domestic disappearance for human consumption, we anticipate a combined export and domestic demand of between 400 and 475 million bushels per annum. This compares with average crops in Canada of 385 million bushels in the decade of the twenties, 330 million bushels in the thirties, 393 million bushels in the forties, and an average of 525 million bushels in the seven years 1950-56.

4. The surplus built up as a result of the very large crops in recent years tends to confuse an objective appraisal of the situation. Furthermore, the fact that storage elevators, which have a capacity of some 600 million bushels, have been full of grain (wheat, oats and barley) has introduced an element of inflexibility into the picture. Of necessity, shipments from individual elevators are determined in part by the grades of wheat required for delivery and in part by the location and availability of the railway cars required to move it. But the Wheat Board very properly tries to accept delivery of reasonably proportionate quantities of wheat from all farmers in all areas and not unnaturally this has complicated the situation. The difficulties of today notwithstanding, if our estimates of foreign and domestic demand are reasonable ones, it does not seem that Canada should plan any permanent reduction from the present acreage sown to wheat.

5. The problem appears to be that of considering adjustments and modifications of the present system. Under the present system the Canadian Wheat Board announces shortly before the harvest each year the initial or minimum prices which will be paid for the crop which is about to be harvested. These minimum prices, which vary depending upon the grade, apply to the full amount of the crop, although the Board gives no undertaking as to when it will be able to accept delivery, and payments are made

only as grain can be accepted by the Board. In other words, while farmers are informed as to what the initial prices for their crop will be, they do not know when they may expect to be paid for it. (In practice, an effort has been made to give some measure of stability to farmers' cash incomes through a combination of cash payments at initial prices for deliveries of some part of the current year's crop, plus cash payments covering the final prices for previous years' crops.)

6. It seems to be desirable to give the farmers, in advance, as much information as possible not only on price (as is done now), but also on the quantities of wheat which can probably be accepted by the Board, and paid for, in the coming year. The quantity in any year will depend upon the stocks on hand in relation to off-farm storage capacity; and the expected disposal of wheat in both the domestic and foreign markets. The Board should be able to appraise these two factors and to arrive at an informed estimate of the quantity which it would be possible to move off farms in the next marketing year. The announced initial price would apply to this quantity. Such a procedure under which both price and quantity would be announced in advance should be of some advantage to wheat producers. As we have pointed out, under the present arrangements the producer does not know in advance the quantity on which the minimum price will be paid during a given year. While he has an assured price, he has no assurance of a minimum income. If the Board were required to pay the minimum price on the quantity they estimated could be moved off farms, this would assure the producer of a minimum income, except in the event of a small crop. In times of surplus, such a procedure could exert a corrective influence.

7. Persistent surpluses may indicate the necessity of bringing about some reduction in acreage sown to wheat although as previously indicated we do not think this should be necessary on a permanent basis over a long period. It should be stressed that while there are several possible approaches to the problem of inducing a reduction in wheat acreage, there is no single course of action which would be equally effective under all circumstances. The most appropriate procedure would depend upon the particular combination of conditions prevailing at the time. For example, if the acreage under summer fallow were not unusually large, farmers might be offered some inducement to increase the area under summer fallow. Or, again, if the markets for alternative products were strong, action might be taken to encourage diversion of wheat acreage to other crops.

8. We feel that, among the several approaches, consideration should be given to the method of relating the initial price to a quantity determined by the storage situation and the prospects for disposal. Under this method, when surplus production is taxing storage facilities to the limit, farmers would know in advance that if there were another very good crop in

western Canada, only a stated part of it could be delivered to the Board in the coming year. The balance would have to be stored on the farm or used for feed. If such a situation continued, farmers would tend to reduce their wheat acreage to some extent and thus achieve a better balance between supply and demand.

9. To be more specific, we suggest that consideration be given to a modification of present procedures along the lines described in this and following paragraphs. It is suggested that in periods of substantial surpluses, the Board should announce, well before seeding time, the quantity of wheat for which it will guarantee a minimum price in the coming crop year, having regard to export prospects and to the storage situation as it is likely to develop during the year. The initial price announced at this time would apply only to this guaranteed quantity, but it would apply even if the Board later found itself unable to accept delivery because of storage difficulties or variations in demand for specific grades of wheat. In this event, the Board would be required to pay for the wheat it was committed to accept even though it was, in fact, unable to take delivery of it. The Board would not make any commitment in advance either as to the price it would pay or the time when it would purchase any quantities of wheat over and above the initial guaranteed quantity. (However, the Board would be required to purchase all such additional quantities eventually just as it is at present.) The quantity of wheat which the Board would guarantee to accept should be broken down into guaranteed delivery quotas for each farmer who holds a wheat delivery permit. To begin with, the delivery quota for the individual farmer might be based wholly or in part on his previous production records. And while the difficulties involved in working this out would no doubt be considerable, it should be possible for the Board to determine a fair allocation of the total guaranteed quantity on the basis of the previous acreage and yield records which are in the possession of the Board. One of the main difficulties would be to devise a system of quotas which would not appear to the farmer to be the result of arbitrary decisions on the part of the Board. But, depending upon the circumstances, some system along these lines might be more acceptable and more effective than the kind of acreage restriction which has been employed from time to time in other countries.

10. The degree of income stability which is provided in the present marketing system could be retained if some such measures were adopted. Farmers' needs for cash income could be met by a system of intermediate payments based on a rate of delivery over the crop year. The Board should not be required to accept the total quota of any farmer at the exact date when the farmer wished to deliver it. But a rate of payment could be made similar to that of recent years which would be based on intermediate or partial deliveries of the total acreage quota. It might happen that the Board would find itself unable to move certain grades over the

period in which the quota was deliverable. In this event, the farmer would be paid for wheat which he would be required to deliver at some later date.

11. Under this proposal, each farmer would know, in advance of seeding, both the minimum price the Board would guarantee and the amount of wheat to which it would apply. In this way, unless the crop were abnormally small, farmers would have an assurance of a minimum income from wheat which would be more clearly defined than it is under the present delivery system. Furthermore, farmers who were in a position to elect alternatives to wheat production would be in a better position to make decisions on these alternative possibilities. In this connection, farmers who produced more wheat in one year than their guaranteed delivery quotas called for would be entitled to carry forward the surplus on their farms and deliver it against their quotas in the following year. In some cases this might make it easier for farmers with surplus wheat to make decisions respecting alternative possibilities to wheat production in the following year.

12. Under this proposal, the Wheat Board would not be required, in periods of substantial surpluses, to commit itself on an initial price for a total crop of wheat for which there were no immediate market prospects. The limited commitment along the lines suggested would not remove the responsibility of the Board for the eventual marketing of all wheat produced. It would, however, reduce the degree of commitment in a period when supply was clearly in excess of anticipated demand.

13. We wish to reiterate the view expressed earlier that, at times when surpluses accumulate to the point of grave concern, the possibility of planned reduction in output can be approached in a variety of ways. Illustrations of these can be found in Canadian experience and in the experience of other countries. Each method has its advantages and disadvantages, and the preferable procedure will depend on the circumstances at the time. The particular procedure we have outlined in some detail would, we think, be of advantage to the farmer in comparison with the present situation. It is, we believe, deserving of consideration as a continuing feature of the operations of the Wheat Board.

THE FISHING INDUSTRY

1. ALTHOUGH fishing and fish processing account for less than 1% of the total output of the Canadian economy and, on an average throughout the year, provide employment for only about 1% of the labour force, those figures considerably understate the industry's importance. The number of Canadians who obtain a substantial part of their livelihood from fishing, either on a part-time or full-time basis, is larger than the labour force figures would suggest; and the dominance of the industry in many places where alternative cash incomes are not readily available makes its output of decisive importance for the welfare of those areas. The industry is also exceptional in that much of the abundant resource on which it is based is located outside the territorial limits of Canada. Another of its features is that about two-thirds by value of its output is exported—and exported in the form of more than a hundred different products. It is these exceptional characteristics which give rise to the industry's special problems.

2. Per capita consumption of fish in Canada is low compared with that in many other countries, and amounts to less than 10% of that of meat, poultry and eggs taken together. With the anticipated growth in Canada's population, total domestic demand will increase and this will probably be accompanied by some increase in per capita consumption. The main markets, however, for the catch of Canadian fishermen will remain abroad. Of these the most important will be the United States, which today absorbs approximately half of the total production of the Canadian fishing industry. Any increase in the United States tariff on fish or fish products, as has frequently been proposed, would therefore have a directly adverse effect upon the prosperity of the Canadian fishing industry. Other markets, however, in Europe and in the Caribbean will remain important. Many of the countries in these areas support their fisheries directly by artificial aids or bounties and indirectly by exchange or trade barriers. In view of

the economic prospects that we visualize for Canada over the next 25 years and the alternative sources of employment that we foresee, we do not think that Canada would be wise to institute similar policies. However, we hope that Canada will take every opportunity for negotiations leading to removal or reduction of barriers to international trade in fish.

3. Such collaboration in the removal or reduction of barriers would parallel the efforts that have been made internationally to conserve and manage fish stocks and to prevent encroachment. The machinery for collaboration already exists and it may be expected that Canada will play a leading part in its continued operation. We are of the opinion that it will also be necessary for Canada to re-examine its doctrine of territorial waters in order to remove the inconsistencies that have been created by the vagaries of history, with the result that in one area, for instance, foreign vessels may operate nearer the coast than Canadian vessels.

4. If we are to take full advantage of this resource, continued biological and technological research will be necessary by both government and industry. Already on the Pacific and Atlantic coasts use is being made of new technological developments designed to increase efficiency both in fishing and in fish processing. The use of electronic equipment for finding fish, of improved methods for preserving them, and of mechanical means for skinning and filleting them is growing. In most cases these new methods necessitate the introduction of larger fishing vessels and of more costly processing plants. This in turn requires larger capital investment. Substantial sums of capital have been coming forward for these purposes but more will be needed. It remains to be seen whether the industry itself will be able to find the necessary capital or whether government assistance will be required.

5. As larger vessels and new mechanized processing plants become more common, the fishing population will tend to become concentrated in fewer centres. In spite of the movement in this direction that is already noticeable, there are still in eastern Canada many fishing villages where the catch per man—and consequently average income—remains low. At present the spread of incomes ranges from a net annual average of \$250 for a share-man in the small-boat fisheries of Newfoundland and some parts of Quebec to \$5,000 or more for a skipper of an Atlantic Coast dragger. Some of the settlements where low incomes prevail may disappear as the industry is increasingly concentrated. However, small secluded communities will probably survive in some places where seasonal gluts of fish occur or where special types are found; in these cases fishermen will have to be prepared to supplement their earnings at other seasons and in other ways. The situation is much better in British Columbia where in 1954 the average income of salmon fishermen from all sources was \$3,056 or almost exactly the same as the average annual earnings (\$3,057) of all paid workers in the Canadian labour force during the same year.

6. The trends that we have mentioned will mean that the number of Canadian fishermen will decline. Between 1947 and 1954 it appears that 38% of the fishermen in Newfoundland took up other employment. The number of fishermen in the other provinces has also been declining, but at a lesser rate. By 1980 it is estimated that the total number of fishermen will drop by about one-sixth. In spite of this anticipated decrease in employment, total production by 1980 will probably have increased by some 60% because of rising productivity. As is set out in the study that has been made for us on *The Commercial Fisheries of Canada*, domestic demand will be strong, both because of population growth and because new methods of keeping fish fresh will increase its appeal. With strong market demand both in Canada and the United States and with rising productivity, incomes of those who remain in the fishing industry should be much higher by 1980 than they are today.

THE FOREST INDUSTRIES

1. THE INDUSTRIES that produce lumber, pulp, paper and other forest products form an important part of the Canadian economy not only because of the value of their production and the number of people they employ but because their products, particularly those of a primary manufactured form, are exported in very large quantities to other countries, especially the United States. These industries have been expanding at about the same rate as Canadian industry in general. Gross value of production of the forest industries in 1954 was estimated at \$2,508 million, compared with \$1,610 million in 1947 and \$682 million in 1928. Since 1929, the net value of the production of the forest industries has been between 5½ % and 6% of the value of the total output of the Canadian economy. In each year since the war, these industries have employed about 5% of the civilian labour force.

2. The most important forest products are newsprint and lumber. However, the rate of expansion since the war has been greatest in two of the smaller segments of the industry, veneer and plywood production. The breakdown of the industry into the major product classifications is shown in the following table:

Table XIV

CLASSIFICATION OF FOREST INDUSTRY PRODUCTION — 1954

Commodity	Quantity	Percentage increase in quantity produced 1946 to 1954	Percentage breakdown of Forest Industry production 1954
Lumber	7.2 billion bd. ft.	43%	27.3%
Veneers	495 million sq. ft.	121	0.8
Plywood	888 million sq. ft.	173	3.8
Newsprint	6.0 million tons	44	37.2
Other papers	1.6 million tons	39	15.2
Market pulps	2.3 million tons	57	15.7
			<hr/> 100.0%

3. The lumber industry is concentrated in British Columbia which produces over half of the total Canadian output and employs more than half of the labour force. Over 25% of the total is produced in Ontario and Quebec and the rest is spread throughout the other provinces. The pulp and paper industry has traditionally been centred in the Province of Quebec, although there has been since the war a rapid expansion of integrated operations on the west coast. There are also large establishments in Ontario and other provinces.
4. The forest industries make a very substantial contribution to Canada's export trade. This is illustrated in the following table:

Table XV

EXPORTS OF CANADIAN FOREST PRODUCTS, 1955

(millions of dollars)

	Amount	Percent
Forest products:		
Lumber (including plywood, veneers and shingles)	\$ 470	11.0%
Manufactured wood products	7	0.2
Newsprint and other paper products	694	16.2
Market pulps	297	6.9
Pulpwood	49	1.1
Total forest products	\$1517	35.4
Other commodity exports (excluding gold)	\$2765	64.6
Total exports	\$4282	100.0%

5. Exports of lumber and of pulp and paper products have been rising steadily for many years, while exports of shingles and pulpwood have declined. The most important forest product export is newsprint. More than 90% of the Canadian newsprint production is exported, and over 80% of such exports is to the United States. The exports of other paper products are negligible. Similarly, about 80% of Canada's exports of market pulps (paper-pulp and dissolving pulp sold directly to the market) goes to the United States. Canada is currently exporting about 50% of her total production of lumber. Exports of lumber to the United States have increased very greatly as a result of high levels of construction, increased lumber consumption, higher prices and reduced tariffs. Exports of lumber to the United Kingdom, which used to be our biggest lumber customer, have been relatively less important and currently are running about 20% below prewar levels. Because of the high percentage of the production of the forest industries which is exported, it is obvious that any assessment of the future prospects of these important industries must rest very largely upon estimates of future world demand for forest products and the share of this demand which is likely to be obtained by Canada.

6. In *The Outlook for the Canadian Forest Industries*, a study to be published under the auspices of the Commission, estimates are made as to the expected growth in the output of the forest industries and in the domestic and foreign demand for Canadian forest products. According to these estimates, production should nearly double by 1980. It is anticipated, however, that the proportion of this production which will be exported will be slightly smaller than the proportion currently being exported, and that exports of forest products will constitute only about one-quarter of total Canadian exports in 1980 compared with 35% in 1955. This assumes that there will be no basic changes in United States tariff policies and that other countries will not find their ability to purchase Canadian newsprint and lumber restricted severely by exchange difficulties.

7. It is expected that, over the next 25 years, newsprint and lumber will continue to be the most important segments of the forest industries. The demand for Canadian newsprint in 1980 should be about double what it was in 1955. It is estimated that United States demand for Canadian newsprint will be only half again as large as it is now, but that other foreign demand will increase fourfold and that domestic demand will more than double. In 1980, as in 1955, the great bulk of newsprint production will be exported, but the proportion going to the United States will be somewhat lower. A substantial increase in the over-all demand for lumber of various kinds is forecast. This is based on the expectation that Canadian lumber exports will gain a somewhat larger share of the United States market and that domestic requirements will increase by approximately 50%. Large increases in the domestic demand for other paper products are anticipated. It is estimated that exports of market pulps will more than double by 1980 but that pulpwood exports will decline slightly. The demand for fuelwood is expected to decline rapidly.

8. Exports of newsprint to the United States will probably increase by only 50% primarily because total United States requirements are expected to increase at a considerably lower rate than those of other markets. In addition, the expansion of the newsprint industry in the southern states and the development of techniques to utilize the hardwood resources of the northeast will result in some relative decline in the dependence of the United States on Canadian supplies of newsprint. In the European markets for lumber it is possible that Canada may from time to time meet some competition from the Soviet Union.

9. To meet this increased demand for Canadian forest products, the total cut of wood in Canada will probably increase by about 60% by 1980. Available information on our timber resources indicates that, taking the country as a whole, there is a sufficient supply to meet the requirements in 1980. Canada's forests extend over an area of one and a half million square miles, and two-thirds of these support stands of timber which either now or at some time in the future can be utilized commercially.

The estimated quantity of wood that could be cut on lands now classed as accessible is more than double the present amount being cut, and on all the commercially productive lands is nearly three times the present cut. Problems of supply, however, exist in particular regions or with respect to certain species and qualities of timber.

10. The following table compares the amount of wood now being cut with the estimated amount which could be cut for the different regions:

Table XVI

**COMPARISON OF THE QUANTITY OF WOOD NOW BEING CUT
WITH THE ESTIMATED QUANTITY THAT COULD BE CUT**
(in Millions of Cubic Feet)

	Quantity of wood cut in 1954	Estimated quantity of wood that could be cut	Current cut as a percentage of possible cut
Accessible Forests — Softwoods			
Atlantic.....	347	567	61%
Central.....	1,231	1,773	69
Prairies and North...	164	797	21
British Columbia....	1,000	1,347	74
Total.....	2,742	4,484	61%
Accessible Forests — Hardwoods			
Atlantic.....	39	195	20%
Central.....	263	997	26
Prairies and North...	60	696	9
British Columbia....	2	41	5
Total.....	364	1,929	19%

The above shows that the amount of both softwoods and hardwoods being cut in the accessible forests of all regions can be increased substantially. If the potentially accessible forests are also considered, the estimated quantity of wood that could be cut as shown in the table would be increased by about 25%, thus representing a reserve for the future which will become a significant factor in the continued development of the forest industries. In addition, it is probable that technological developments will have the effect of increasing the degree to which timber reserves can be utilized in the future.

11. Considering only the accessible areas, the direction of future regional trends of expansion will be determined not only by the availability of wood supplies but also by the location and type of demand for end

products. The quantity of each product—sawlogs, veneer logs or pulpwood—included in the total production in each region will depend upon the relative regional price levels of the different products and on the forest policy of the provincial governments then administering the resource.

12. The future development of the Canadian forest industries rests in large part on their ability to maintain their competitive position in world markets. This means that there must be deep and constant concern about competitive costs. Improvement in forest management practices is essential if future wood supplies are to be obtained at competitive prices.

13. Technical developments in the industry are making possible more extensive use of lower grade wood resources. The location of new capacity will therefore tend to place less emphasis on the quality of the forests and more on the market for forest products. This may reduce some of the competitive advantages of Canadian producers arising out of their large reserves of, and accessibility to, better grades of wood. Furthermore, mechanization is reducing the labour content in the production process which will reduce the competitive advantage vis-à-vis the United States producer resulting from lower Canadian wage rates. In these circumstances it is extremely important that our producers have access to the most advanced technological developments in wood utilization and processing and that extensive research by industry and by governments be given every possible encouragement.

14. It is important that more be done towards informing the public about the need for conservation and, in particular, that owners of farm woodlots be instructed in ways in which they could make a greater contribution to the forest products industries while improving their own incomes in the process. This country still has large reserves of timber to meet the growing demands for wood, but their relative remoteness from the established industries leaves us in no position to waste our forest resources, particularly the more accessible resources, in the profligate fashion that may have been permissible in earlier times.

15. Of great concern, therefore, is the protection of the forests from fire, insects and disease. Research in forest fire protection methods has made great strides during the past quarter century but even greater efforts are necessary if this hazard is to be kept within reasonable bounds. It was suggested to the Commission that a new research organization on forest fires be formed under the auspices of the various organizations interested in the forest resources but independent of governmental agencies. Another suggestion is that military personnel might be trained to act as firefighters in cases of emergency as is done in some other countries. Considerable progress has been made in research aimed at the control of insect and disease epidemics. The spraying of the spruce budworm-infested forests of New Brunswick and Quebec is an example of experi-

mentation designed to this end. Much fundamental research is also needed in the fields of plant ecology and soil science in order to develop improved forest management and utilization techniques. In this connection the work now being carried out on site classification should be continued, providing as it does the basis for deciding the economic feasibility of alternative forestry techniques.

16. It is also evident that profound changes will occur in the operations of the wood processing industries and in the nature of the demand for their products. More of each tree will be used. Products will tend to have a higher manufacturing content, to be greater in variety but more uniform in quality and to have a higher unit value. Processing will become more complex. These trends may require a closer integration of the various separate industries which make use of our forests if full advantage is to be taken of new technology and if the best use is to be made of our forest resources.

MINING, SMELTING AND REFINING

1. THE MINING industry in Canada has expanded very rapidly since the 1920's and particularly in the last five years. The value of production of the mining, smelting and refining industries in 1955 (not including petroleum, natural gas and coal) amounted to \$1,634 million compared with an average gross value of production, in current dollars, of \$217 million for the years 1926 to 1930 and an average of \$579 million for the years 1945 to 1949. The growth in importance of this industry can be seen by the fact that in 1926 to 1930, its net output amounted to 2% of the total output of the economy; in 1945 to 1949 this had grown to over 3%, and in 1955 to about 4%.

2. The expansion in production since 1926-30 and since 1945-49 of each of the principal metals and industrial minerals is shown in the following table:

Table XVII

CANADIAN METALS AND MINERALS PRODUCTION (in thousands of short tons)

	1926-30 average	1945-49 average	Pre- liminary 1955	1955 as a percentage of 1926-30	1955 as a percentage of 1945-49	Canadian production as a percentage of free world production in 1955 ¹
Copper.....	102.5	230.3	324.6	315	140	10
Aluminum.....	34.4	289.0	584.2	1,700	200	20
Nickel.....	44.3	119.5	174.6	395	145	82
Gold ²	1.9	3.3	4.6	240	145	17
Zinc.....	96.6	244.9	427.6	445	175	15
Iron ore.....	—	1,923.3	16,360.0	—	850	5
Lead.....	159.3	167.9	194.0	120	115	10
Uranium.....	—	—	n.a.	—	—	—
Asbestos.....	275.1	595.7	1,055.3	385	175	84
Gypsum.....	1,095.3	2,275.7	4,798.2	440	210	n.a.

¹ Based on preliminary estimates.

² Millions of fine ounces.

The most striking features of this growth are the tremendous increases which have occurred in the production of aluminum in Canada since the 1920's, and in the mining and export of iron ore in the past few years. Output of nickel and asbestos has also shown rapid growth, and for both Canada has retained her position as the principal world supplier.

3. The relative importance of the principal metals and industrial minerals in terms of the value of production in 1955 is shown in the table below. It is interesting to note that together copper, aluminum, nickel and gold accounted for over 50% of the total value of production of the mining and smelting industry in 1955.

Table XVIII

CANADIAN METALS AND MINERALS PRODUCTION IN 1955¹

Metallic minerals	Value \$ millions	Percent of total value
Copper.....	\$240	14.7%
Aluminum.....	225	13.8
Nickel.....	216	13.2
Gold.....	157	9.6
Zinc.....	116	7.1
Iron ore.....	113	6.9
Lead.....	56	3.4
Silver.....	25	1.5
Uranium oxide.....	23	1.4
Platinum group metals.....	23	1.4
All other.....	33	2.0
	<hr/> \$1,227	<hr/> 75.0%
Industrial minerals		
Asbestos.....	\$99	6.1%
Salt.....	10	0.6
Gypsum.....	9	0.5
Sulphur.....	6	0.4
Titanium dioxide.....	5	0.3
All other.....	20	1.3
	<hr/> \$149	<hr/> 9.2%
Structural materials	\$218	13.3%
Crude and artificial abrasives	\$ 40	2.5%
Total	<hr/> \$1,634	<hr/> 100.0%

¹ Based on preliminary estimates.

4. The direct employment provided by the mining industry is not large in relation to the total labour force, although it has been increasing in recent years in conjunction with the rapid expansion of the industry. Total employment in the mining industry, including smelting and refining, was 105,000 in 1955 or 2% of the total labour force, compared with 50,000 in 1926-30 and 77,000 in 1945-49. However the industry by its large capital expenditures has indirectly led to the employment of a great many persons in the construction, transportation and manufacturing sectors of the economy.

5. The greater part of the production of the Canadian mining industry is exported to other countries. In 1955 total exports of metal and industrial minerals amounted to \$1,018 million or 62% of the total value of production in that year. This accounted for about 25% of Canada's commodity exports in 1955, an increase from 9% in 1926-30 and from 12% in 1945-49.

6. Canada possesses the mineral resources to sustain much higher levels of output. It is not usually necessary for mining companies to prove reserves for more than their estimated requirements for the next 20 or 30 years. Most of the important mines have done this, and in the normal course of events many of them will find more ore in the same or adjoining deposits when it is needed. Less than one-third of the nation's land area has so far been covered by geological reconnaissance mapping and very much less than that on a scale adequate for mineral exploration. As additional areas are mapped and with continuing improvements in the science and techniques of geology, there is little doubt that many new mines will be discovered in Canada in the years to come.

7. Estimates of the growth of the Canadian mining industry must rest essentially on estimates of the probable world demand for metals and industrial minerals and the share of this demand which Canada may be able to obtain. There are grounds for optimism on both these counts. Everywhere the demand for building materials, for machinery and equipment, and for consumer durables is rising; and rising with it is the demand for minerals. Canada should become a major supplier to meet this increased demand because of her geographical location relative to the world's major markets (particularly the United States), favourable geological conditions, and relatively low costs of production.

8. Estimates of the expected demand for metals and industrial minerals and the expected increase in the production of these metals and minerals are contained in the study entitled *Mining and Mineral Processing in Canada*, which will be published under our auspices. This study estimates that the total value of the industry's production by 1980 may be about three and a half times present levels, compared with an increase in the Gross National Product to about three times the current figure. Exports may be four times as large as at present if the United States

market is not restricted and if purchases by overseas countries are not limited appreciably by exchange difficulties. On this basis exports of metals and industrial minerals would account for as much as one-third of all commodity exports by 1980 compared with one-quarter at the present time.

9. The increase in the volume of production may be even greater than the increase in production, measured in value terms. This seems probable because the estimates of future increases in the value of production allow for a moderate decline in prices relative to other goods and services. With some notable exceptions such as copper and asbestos, the historic trend for mineral prices, relative to other prices, has been downward. New techniques, improvements in organization and advances in technology at all levels from exploration and development through mining and mineral processing to marketing have continued to offset the cost increases that have been encountered in most of the mining areas of the world. The same trend is expected to prevail on the average, again with some exceptions, during the next two or three decades.

10. There will, of course, be wide variations in the rate of increased world demand for each of the different metals and in the proportion of this demand which may be met by Canadian sources of supply. By 1980, the value of the output of aluminum ingot in Canada, based on our low-cost power resources and on imported bauxite or alumina, might be close to five times as great as it is today. Twenty-five years from now the production of iron ore might be four times as great in value and the production of copper twice as great in value as in 1955. Depending on relative price movements and on the extent to which the Canadian source materials are processed in this country, the value of the production of both nickel and uranium may be as great, or nearly as great, as that of copper by 1980. Other more important non-ferrous metals, the output of which by 1980 could be two to four times the present level, include lead, zinc and magnesium. Titanium metal and such elements as manganese, thorium, lithium, columbium and the rare earths may also make a substantial contribution to Canada's production of primary metals in the years to come. We expect the production of gold, on the other hand, to decline unless there is an increase in price.

11. Asbestos will probably continue to be much the most important industrial mineral produced in Canada. The output of potash, which is insignificant today, may also reach very substantial proportions. Sulphur production, both as a by-product of metal mining and from natural gas, should become an important industry. The output of gypsum is also likely to increase considerably both for domestic needs and for export to the United States. Production of the various structural materials such as cement, sand and brick for the domestic market will increase with construction expenditures in Canada.

12. A great deal is said from time to time about further processing of minerals, metals and other materials in Canada. Certainly it is desirable that no opportunities for doing so should be overlooked, but we should always remember that Canada's customers in other countries usually have other sources of supply available to them. If, for instance, obstacles were placed in the way of exporting iron ore from Canada in the form of ore, the steel companies in the United States, who are the principal customers for Canada's iron ore, could probably fill their requirements somewhere else. We are fortunate to have very large and high-grade iron ore deposits in Canada and their development has added greatly and will continue to add to the well-being not only of those Canadians who live in the areas where the mines are located but also of other people who are engaged in the transportation of the ore and in supplying goods and services to the operations. Moreover, apart from tariff considerations, plants for processing metals or minerals are placed normally in the most economic location, sometimes near the resource, at other times close to the market. To run counter to these market forces would tend to increase the costs of the final product and make the development of the resource less attractive.

13. There may be sound arguments and better opportunities for refining a greater percentage of certain metals—for example, nickel, lead, zinc, titanium and perhaps uranium—prior to export, but each situation requires careful study on an individual basis before any such conclusion would be justified. In some cases, and titanium is a good example, the tariff situation in the United States may be an effective barrier. In others, as with exports of lead and zinc from eastern Canada, we must continue to export concentrates unless and until smelting facilities become available in that part of the country. In the case of nickel, for example, it might be reasonable to stipulate that any additional production should be refined in Canada before being exported, but the circumstances prevailing at the time would need to be considered carefully before any such decision could be reached with assurance. There will be an upper limit to the amount of low-cost power which can be obtained from advantageously situated water power sites in Canada. This, together with advances made elsewhere in the generation of electricity by nuclear means, could cause a levelling off, at some time in the future, in the production and export of high energy content commodities including aluminum, titanium and uranium.

14. As a way in which to come to grips with this problem, there might be some merit in requiring exporters of ores, concentrates and other semi-processed commodities to obtain export permits, which when issued would be good for a stated number of years. Each case should be examined carefully and individually. New mines, for example, could be given every opportunity to get under way and into production. But it could be made

clear that the circumstances in each case would be re-examined at stated intervals and that exporters would be expected over the years to do more processing in Canada except when the obstacles in the way of doing so proved to be real and the cost disadvantages appreciable.

15. One way in which further aid and stimulus might be given to the mining industry would be to step up quite considerably the rate of mapping and surveying by the Geological Survey. Excellent work is being done by this branch of the government service, but unless a considerably larger staff is recruited and steps are taken to retain those who are recruited, the preparation of a geological map of Canada will not be completed for many years. It is suggested that the present programme be expanded and speeded up to the fullest possible extent within the limitations of the number of qualified people who are available in this field. Further emphasis on metallurgical research and on process development by the industry and by both federal and provincial mines departments would also be desirable from the standpoint of this important industry.

DEVELOPMENT OF ENERGY RESOURCES

1. THE AMOUNT of energy in all its forms (coal, petroleum, natural gas, wood, water power and nuclear energy) which a country consumes is related to a number of factors, including its stage of economic development, its industrial structure and its level of income. With few exceptions countries which are industrially advanced and which have high living standards are large users of energy. On a per capita basis Canada has one of the highest energy consumption rates in the world, approximately equal to that of the United States. This is a reflection not only of our industrial progress and relatively high income levels, but also of the fact that some of our most important industries such as aluminum refining and pulp and paper are very large users of electric power.

2. Total consumption of all forms of energy in Canada over the next 25 years is expected to increase steadily, although at a slightly lower rate than the Gross National Product. At the same time, there will be significant changes in the pattern of energy use, reflecting structural changes in the economy and in the energy requirements of its various sectors. Manufacturing, mining and the energy-producing industries themselves are expected to use a higher percentage of the total than at present, with residential and commercial demands being correspondingly reduced. These estimates are set forth in Table XIX which shows comparative figures for 1926, 1953 and the projected distribution for 1980.

3. The changes in the sources of energy by 1980 are expected to be even greater than the changes in the pattern of consumption. Estimates, again with comparable figures for 1926 and 1953 and projected figures for 1980, are shown in Table XX.

4. It should be noted that this distribution is based on the consumption of energy in its primary or relatively raw form, before the deduction of losses due to the inefficiency inherent in most of the methods by which

Table XIX

THE ESTIMATED PATTERN OF ENERGY USE

*Percentage of total energy consumed, measured in terms of
tons of coal equivalent*

Consumption Sector	1926	1953	1980 (projected)
Energy industries.....	7%	9%	14%
Manufacturing and mining.....	18	23	29
Residential and commercial.....	37	30	21
Transportation.....	29	29	26
Non-fuel uses.....	3	5	8
Other (waste and unaccounted for)	6	4	2
	<hr/> 100%	<hr/> 100%	<hr/> 100%

Table XX

THE ESTIMATED SOURCES OR TYPES OF ENERGY USED
IN CANADA

*Each source as a percentage of total energy consumed, measured in
terms of tons of coal equivalent*

Energy Source	1926	1953	1980
Coal (including coal for electrical generation).....	69%	39%	16%
Petroleum.....	10	42	45
Natural gas ¹	2	4	25
Wood.....	16	7	1
Water power ²	3	8	11
Nuclear energy ²	—	—	2
	<hr/> 100%	<hr/> 100%	<hr/> 100%

¹ Including natural gas liquids.

² Measured in terms of its contribution as electricity.

energy is produced, transported and consumed. Hydro-electricity, however, can be put to work much more efficiently than liquid fuels or coal, and its effective contribution in the total energy picture today appears to be in the order of 20% contrasted with 8% as shown in the table. Twenty-five years from now the corresponding percentage may be more like 25%.

5. Nuclear energy may begin to appear on a commercial scale before 1970, with the most likely locations southern Ontario and the Maritimes. Like hydro-electric power, it is an efficient source of energy, and by 1980 its net contribution to energy requirements may be about 4%. The comparatively modest role envisaged for nuclear energy may come as a sur-

prise, and it may be that unforeseen technological advances could make nuclear produced electricity competitive at an earlier date than that forecast here. Nevertheless, Canada is well endowed with other forms of energy, which in most areas are both accessible and relatively cheap. Other countries, including the United Kingdom, Western Germany and Japan, are in a less fortunate position and consequently nuclear energy in those countries will tend to be developed more rapidly. Because nuclear energy will become competitive at a later date on this continent, it will probably not be a well-established industry until about 1980. Our forecast suggests that one out of every three kilowatts of new generating capacity under construction at that time would be of the nuclear variety.

6. Perhaps the most striking single thing about the forecasts of Canada's steadily mounting energy requirements is that by 1980 between two-thirds and three-quarters of a greatly increased total will be supplied by petroleum and natural gas. In both of these commodities Canada will on balance be more than self-sufficient. This is a very different picture from that which prevailed in 1926, when petroleum and natural gas accounted for about one-eighth of the total energy consumed and when almost all petroleum products were imported. The projection of demand for natural gas suggests in fact that its consumption may increase ten or more times within the 25-year period. It is clear from these figures that Canada's future economic development will depend to an increasing extent upon its resources of these fuels.

7. The size of our domestic requirements is of course only one of the determinants of the rate of growth of the Canadian oil and gas industry. The first and most important factor is that the oil and gas be there to find and develop. There is every reason to believe that the geology of the interior plains region of Canada stretching from the United States border into the Northwest Territories is favourable to the discovery of large amounts of oil and gas, and that our prospective reserves should be more than sufficient to meet any demand in Canada in the foreseeable future. The Commission's study, *Canadian Energy Prospects*, suggests a possible level of production in 1980 substantially above forecast domestic demand. The potential output of oil in 1980 is estimated at about ten times 1955 production and between one and a half times and twice the anticipated Canadian requirements in 1980. For gas, the potential output is estimated at over fifteen times 1955 output which will be about 50% more than expected domestic requirements in 1980. This means that there will be large quantities of oil and gas available for export. If we continue to import oil into Quebec and the Atlantic Provinces, the quantities available for export from the Prairies will be correspondingly greater. Should these exports be realized, our net export surplus by 1980 in oil and gas alone would be over one billion dollars per annum compared with an excess of imports over exports in 1955 of \$340 million.

8. It is clear that our ability to reach this level of output will depend in large measure on export demand. In view of our location relative to world markets and to competing sources of supply this means, in effect, exports to the United States. In assessing the prospects for increased sales to that market, one factor in our favour is that the costs to date of exploration, development and production of oil in Canada are lower on the average than similar costs in the United States. In recent years proven reserves discovered in new fields and in new pools in old fields per foot of wildcat drilling in Canada have been almost double the corresponding figure in the United States.

9. This is probably due at least in part to the tremendous extent of favourable oil territory in Canada and the fact that the more obvious geological anomalies are being investigated first. Costs in Canada are of course much higher than the costs of exploration, development and production in the Middle East, but they do not differ appreciably from corresponding costs in Venezuela, the most important of the South American oil-producing countries.

10. Another factor in our favour is our proximity to the United States. Because of this it seems probable that the authorities in that country will continue to look favourably upon programmes for increasing the existing oil reserves in Canada. We believe there are good grounds for concluding that the pace of exploration and development will continue to be rapid. The expansion in the Canadian activities of most of the major international oil companies appears to reinforce this view. We believe also that the long-run prospects for the production of oil in Canada and for exports to the United States are promising. There are difficulties in the way of more immediate exports however, which it is important to review and consider.

11. The most important markets, actual or potential, for Canadian oil are those in western Canada, the Toronto area, in the Pacific Northwest and North Central States of the United States, in California and in the Montreal area. It is important to note that there are obstacles to entry into the United States market. Although the tariff on crude petroleum is low, there is a recurrent threat of official or unofficial quota restrictions on crude petroleum and a prohibitive tariff on refined products. The Toronto market is now receiving western oil, but the Montreal market is at present served by imported crude from the Caribbean area and the Middle East and to some extent by imported products from the United States. Importations into Canada of crude, residual oil and refined products are not of course restricted to the Montreal area but enter Canada at many different places from St. John's to Vancouver; the Montreal area, however, represents the largest market not now being served by Canadian sources of production. Broadly speaking, the same large international oil companies, or affiliated or subsidiary companies, which dominate the producing,

refining and marketing sections of the Canadian industry, are the principal suppliers of crude to the Montreal market, and are important suppliers in most areas of the United States. For the reasons given in the preceding paragraph, it seems probable that these companies will continue to search for and develop oil in western Canada, but, should the expected expansion in exports to the United States not occur, a large part of the oil so discovered may have to be "shut in" for a considerable time. It is possible that a situation of this kind might not cause too much embarrassment to the companies concerned, since withdrawals from reserves elsewhere could be offset by increases in the reserves of subsidiaries in Canada; their net worldwide position would not be changed.

12. Such a situation, however, is not one that could be regarded by Canadians with complacency. Under conditions where we have proven and potential reserves more than sufficient for our own longer term requirements, it is better policy for us to develop and use or sell our oil than to be forced to sit upon it until more favourable marketing opportunities occur, such as a time of scarcities or international tension. This is not to suggest that we should rush to sell to the first bidder, regardless of price. It means rather that we should seek more or less immediate markets at reasonable prices for our oil and other materials in order that the present generation may receive some of the benefits from them and in order to ensure the continuation of the present rapid pace of development in our oil industry. Moreover, if circumstances were such that a substantial quantity of the oil discovered had to be shut in for a long period, there would be little or no place for independent Canadian producers, who must receive a reasonable income from sales of their products if they are to survive.

13. What are the alternatives? In the first place it must be emphasized that the soundest and most economic market for western oil, apart from the Prairies and southern Ontario, is in the Pacific Northwest and in the North Central States of the United States—if possible, for refined products as well as for crude—and the cheapest source of supply for the Montreal market is imported crude. If our way into the United States market were likely to be restricted for any extended period of years, however, it is probable that the industry would decide to meet some part of the requirements of the Montreal market with crude from western Canada even though at some sacrifice in terms of price to the producers. Furthermore it is conceivable that at some future time, if the circumstances were such as to warrant it, the government might think it desirable to take steps which would result in a larger share of the Montreal market being served by western crude.

14. Natural gas from western Canada now finds its main market on the Prairies, although the completion of pipelines now under construction

will open the new and large markets of central Canada and British Columbia. In addition, some gas is now exported to the United States, and much larger amounts will move when the pipeline for the Pacific Northwest is completed before the end of 1957. It seems clear that it is in Canada's interest to permit gas to be exported, provided that adequate reserves are maintained to serve our own longer term future needs and assuming that reasonable provision is made for the sale of the by-products of the purifying or cleaning process. It is possible, however, that in negotiations concerning the export of Canadian natural gas, the bargaining position of Canadian exporters will need strengthening if prices and other terms are to be established on a reasonable basis. In this connection it is to be noted that any negotiations respecting exports to the United States must be approved by the Federal Power Commission of the United States, whose function it is to safeguard and protect United States, not Canadian, interests. There is no similar body in Canada and interests of the exporters, and Canadian interests generally, may thereby be prejudiced.

15. It should be noted that the expansion of our oil and gas industry will require very substantial capital investment. As defined by the Dominion Bureau of Statistics, total capital investment in the oil and gas industry in Canada during 1955, including investment in the exploration, development, production, transmission, refining and the marketing or distributing sections of the industry, amounted to some \$450 million. If the level of output we are considering for this industry were to be realized by 1980, the investment required during the intervening 25-year period might be of the order of \$25 billion.

16. Equally striking as the rise in the importance of oil and gas as a source of energy is the decline, actual and prospective, in the importance of coal. Although tonnages required may increase somewhat over the next 25 years, by 1980 coal is expected to account for less than one-sixth of the total of all energy consumed, compared with nearly two-fifths in 1953 and more than two-thirds in 1926. By far the largest market for coal will be Ontario, where it will be needed primarily for the generation of electricity. It is expected that the very considerable coal requirements of that province will continue to be met by importations from the United States and so far as can be foreseen at present there should not be any particular problems of supply.

17. It seems probable that because of the abundance of oil and natural gas in western Canada, the demands for coal from underground mines in that area will continue to decline, except where special metallurgical grades are required. The strip mines should continue to be active, particularly in areas where hydro-electric power resources are limited and where there is little overburden to be removed. There may continue to be difficulties in relocating Alberta and British Columbia coal miners and re-establishing

them in other industries, but the buoyant employment conditions in the West, and the assistance granted by provincial governments, have so far prevented this problem from becoming acute.

18. The situation is somewhat different in the coal mining industry in the Maritime Provinces. Coal is the principal energy source in that area and coal mining is a major source of employment, particularly in the Province of Nova Scotia. The long-term deterioration in the competitive position of the Maritimes coal mining industry, with all its implications for employment in that region, is a continuing cause for concern. In Section 16 of the report, which considers the special difficulties of the Atlantic Provinces, we have some suggestions to make for helping the industry to maintain an appreciable share of the market in the Atlantic region (including requirements for the generation of thermal power), and for assisting miners who may be displaced because of improved mining techniques and because of static or declining sales.

19. Capital expenditures for hydro-electric installations including transmission and distribution facilities over the next 25 years may amount to some \$15 to \$20 billion and the net value of total output of hydro-electric power in 1980 may be four or five times as great as in 1955. With the costs of large hydro installations so very great, and the difficulties of financing them correspondingly imposing, it is increasingly clear that before these projects can be undertaken and financed immediate markets must be available for the power it is proposed that they will generate.

20. In some parts of the country, the efficient development of a large new project may require that it be designed to produce much more power than can be used immediately in the area of economic power transmission although the general growth of the area will require all the output over a period of years. Under these circumstances one possibility is to try, by low rates, to induce one of the relatively few industries that use very large amounts of power and for which power costs are therefore a very important factor, to locate in the area. The difficulty here, in settled or rapidly growing regions, is that such industries typically add relatively little to the diversified economic strength or to the employment opportunities of the region and permanently appropriate a large amount of power which a growing area will need for its own general expansion. In these circumstances there seems to be merit in permitting some part of the power from such a large new project to be exported where possible at economic rates for stated periods of years, after which it would be made available in the area for Canadian use. In this way, the interests of Canadian consumers, immediate and long term, would be properly protected. This would mean cheaper electricity to the general body of consumers immediately and a safeguarding of future electrical supply for the diversified requirements of the region. This policy would not, of course, apply to areas remote from settled centres where the development of

hydro-electricity for industries requiring very large amounts of power seems to be desirable from every point of view, or to areas far from the United States border.

21. The questions of the development of power resources and the downstream benefits on rivers which cross the Canadian-United States border are soon to be discussed at a high level by the governments of the two countries. Undoubtedly in these negotiations Canada's long-term interests in hydro-electric power will be safeguarded. We would hope that prior to the commencement of formal inter-governmental negotiations, the appropriate Canadian authorities will consider our long-term interests in the whole field of energy. These include not only the question of exporting electricity for periods long enough to permit the financing of new installations but also our interests in export markets for oil, both crude and refined products, and for gas and its by-products.

22. In order that a sound and comprehensive policy may be worked out with regard to development, exports, imports and consumption of all forms of energy in Canada, we recommend that a national energy authority be established which would be responsible for:

- (a) advising the federal government and upon request any provincial government on all matters connected with the long-term requirements for energy in its various forms and in different parts of Canada; methods of promoting the best uses of energy sources from a long-term point of view; export policy, including such questions as the further refining of oil and gas in Canada and the disposal of by-products; coal subsidies, etc.
- (b) approving all contracts or proposals respecting the export of oil, gas and electric power, including, where necessary or desirable, the holding of public hearings in connection therewith.

23. If this recommendation is approved, the organization of the Dominion Coal Board should be merged with that of the proposed national energy authority. It is perhaps unnecessary to add that the proposed new body would not interfere with the rights of the provinces respecting control over natural resources.

TAXATION OF THE OIL AND GAS INDUSTRY

1. THE COMMISSION did not undertake an exhaustive study of the effects which taxation of personal and corporate incomes have had and are having upon investment in primary and other industry in Canada. However, we did arrange for a study, *Certain Aspects of Taxation Relating to Investment in Canada by Non-Residents*, to be prepared, and this may be referred to by those interested in these matters. A number of qualified witnesses appeared before us in the course of our public hearings and expressed views on this and related subjects. It seems clear from the evidence that taxation of personal and corporate incomes at present rates does create problems respecting investment by Canadians in Canadian industry. This seems to be true in particular in the oil and gas industry, on which we heard many submissions and proposals. While, therefore, we do not propose to offer suggestions or to comment upon taxation policies in general, it may be helpful if we report our conclusions respecting the taxation of this one industry, the potential growth and importance of which seems hardly yet to be realized by many people in this country.

2. Three important criticisms were offered of our tax system insofar as the oil and gas industry is concerned, namely:

- (a) Canadians are at a disadvantage vis-à-vis the United States operators in the Canadian oil and gas field.
- (b) Certain acquisition and property costs are not allowed as deductions in computing taxable income.
- (c) The method of computing depletion allowances is not as favourable in Canada as in the United States and, furthermore, it gives a substantial advantage to the large integrated oil companies as compared with the independent producers. (Mining companies which are engaged in the exploration and development end of the oil and gas industry enjoy the same advantage under our tax laws.)

3. Very generous tax treatment is given in the United States to individuals and to companies who invest in the oil and gas industry. For example, an individual with a large income, part of which is taxable at rates of, say, 80% or even higher, may invest in oil wells and deduct any part of his expenditure which proves to be unproductive from the amount of his income which is subject to tax. This means that it costs such an individual only 20 cents or less out of every dollar which he spends unsuccessfully in looking for oil either within the confines of the United States or elsewhere; the balance is a special tax concession under the United States tax laws. Similarly the established United States oil companies, which spend by far the largest sums in exploration and development work throughout the world, receive very favourable tax treatment in comparison with other United States industries. To this extent the United States government may be said to be encouraging a worldwide search for oil by United States citizens and United States oil companies. This quite obviously is a perfectly reasonable and proper course for the United States authorities to adopt if they so wish. Undoubtedly their policy has provided a tremendous stimulus to the United States oil and gas industry as a result of which great discoveries have been made and great developments have occurred in many parts of the world, including Canada, which otherwise would not have happened or, at least, would not have happened nearly so quickly. It is quite true that these tax policies place United States citizens and United States oil companies in a preferred position in searching for oil in Canada, compared with Canadian citizens and Canadian companies. But this does not mean that Canada should necessarily adopt the same policy. While we have a vital interest in the development of the oil and gas industry in this country, we have a vital interest in the development of many other industries as well. It would be an unwise practice for Canada to start favouring one industry over others through tax concessions merely because this is being done in the United States for reasons which, in that country, may be perfectly valid.

4. There seem to be two ways in which this problem might be dealt with. One would be to require all foreigners who wish to do business or to hold or develop resources in Canada to incorporate their businesses in this country under the federal or under one of the provincial companies acts. However, there would be no assurance that this action would necessarily negate the tax advantages which United States citizens and United States companies enjoy at present under the tax laws of their own country. An alternative approach and one which we think would be a better one would be to devise some formula for giving companies in which Canadian citizens participate some special concessions under certain circumstances and conditions. Ways in which this might be done are discussed in Section 14.

5. The second criticism of our taxation policies with respect to the oil and gas industry is that operators in this industry in computing their taxable income are not allowed to deduct the acquisition costs of unproductive property other than the original payments to the Crown for leases which have been abandoned as unproductive and for rentals up to \$1 per acre per annum. This criticism would seem to have some validity, provided that the amount which the operators may be entitled to claim as deductions with respect to property costs was limited to the cost of the property to the original company or individual who acquired it. Without some such restriction there might be a pyramiding of acquisition costs through sales from one company or individual to another.

6. The third important criticism of our tax policies with respect to the oil and gas industry has to do with the way in which the depletion allowance is computed. The allowance for depletion to the extractive industries in Canada has served two purposes. In the first place, it permits companies in these industries to recoup out of income that part of their acquisition costs which they are not allowed to deduct in computing their taxable income. The second and much more important purpose of the depletion allowance is to provide a special incentive to the extractive industries to compensate them for the risks which are inherent in any mining enterprise. In the case of the oil industry in Canada, there is not only the risk that no oil or gas will be found, but even if an operator is successful in finding oil or gas, any substantial income therefrom may have to be deferred for some years until adequate markets can be found. These are important considerations, although the time may come when it is felt that the primary industries are sufficiently well established in Canada to do without special concessions. If it is felt that this time has not yet arrived, consideration might be given to changing the form of the special tax incentive which is at present being accorded to the extractive industries. Instead of being granted an allowance for depletion, they might be charged a lower rate of tax on that portion of their profits which is dependent upon risk taking, i.e., the profits from the producing end of the business after all charges and costs pertaining to that part of the business have first been deducted.

7. An alternative approach would be to continue the present principle of granting a depletion allowance at some appropriate rate but computing it the same way as in the United States. In that country a stated percentage of the gross profits from production is exempted from tax. In Canada, at the present time, no allowance is granted for depletion until all accumulated expenditures on exploration and development have first been exhausted as deductions in computing taxable income. This gives a considerable advantage to the large integrated oil companies vis-à-vis the independent operators in the exploration and development field. The former are permitted to offset their exploration and development expendi-

tures against their total income, including their income from refining and marketing. In this way, their exploration and development expenditures may be immediately financed to a considerable extent by tax money, i.e. out of monies which otherwise would have to be paid as taxes on profits earned in other spheres of activity. Furthermore, because these expenditures by the integrated companies become fully claimed earlier than in the case of taxpayers who are producers only, the integrated companies become entitled to a depletion allowance sooner than the independent producers. In effect this means that they obtain a depletion allowance on a larger proportion of the profits earned on the oil or gas which they discover than the independents do. This differential would be removed, at least in part, by the adoption of the method used in the United States.

8. Quite apart from the way in which the depletion allowance is computed, there is the question of whether it is reasonable to permit the large integrated oil companies to deduct their exploration and development costs from their total income in view of the advantage it gives them over independent producers. To an important extent, it seems that the appropriate decision on this question must depend upon the decision which is taken respecting the rate of depletion allowance and the way it is computed (or, alternatively, upon the rate of tax imposed upon the profits earned from production activities). If the depletion allowance is sufficient to provide an adequate incentive for all the exploration and development work that is thought to be desirable, then it may not be necessary or even logical to give a further incentive to the large integrated oil companies. If, however, the depletion allowance decided upon is a relatively moderate one, then this additional incentive to the large companies may be necessary if the desired amount of exploration and development work is to go on.

SECONDARY MANUFACTURING INDUSTRIES

1. WE HAVE included under the category "Secondary Manufacturing" those industries which by and large produce end products rather than industrial materials, and which draw on foreign as well as domestic sources for raw materials and component parts. These industries sell their output principally in the domestic market. Examples are the cotton textiles, motor vehicles and electrical apparatus and supplies industries. By contrast, we have used the heading "Primary Manufacturing" for industries such as smelting and refining which are based mainly on the processing of natural resources into industrial materials. A large part of the output of these industries is exported.

2. We hasten to point out that no completely clear-cut distinction can be made between primary and secondary manufacturing. Some industries contain elements of both, and where statistical difficulties prevent a division being made the industry has been assigned to the group most appropriate to the largest proportion of its output. Some secondary manufacturing industries are also increasingly engaged in functions of a service character such as packaging, warehousing and repairing, and it is not always possible for statistical purposes to identify and separate out these service operations. It seems probable that with the growth and continued integration of industry, the distinction between primary manufacturing, secondary manufacturing and certain sections of the service field will become increasingly blurred. The problem of classification is also apparent in trying to fit particular companies into established industry categories. For example, producers in the oil industry are spreading into chemicals; chemical companies are in the textile business; and meat packers produce margarine and soap.

3. One further word of caution may be needed. There are important differences among individual secondary manufacturing industries, and what may be true for one may not be entirely accurate for another. Further-

more, there are wide differences between the operations and the problems of different sections of the same industry, particularly in textiles and in chemicals. It is important that this be kept in mind when one attempts to generalize about the characteristics and the problems of secondary manufacturing as a whole.

4. The wide diversity of industries which are grouped under the heading of secondary manufacturing is indicated in Table XXI, which lists the industries in question and shows the gross value of production and numbers of employees for each of them in 1953. (The base year for the projections is 1953 because more recent data are not in final form.)

5. Our secondary manufacturing industries sell most of their products on the domestic market; in 1955 only 6% of the total output was exported. The main reason for this is the tariff and restrictive commercial policies of foreign countries. This is particularly true of the United States, the largest potential export market for Canadian manufactures, where tariffs are in general much higher on manufactured goods than on raw or semi-processed materials. Of course not all Canadian secondary industries could compete in the U.S. market even if there were no restrictions against them. Some have natural disadvantages, such as greater distance from the large centres of U.S. population, inadequate experience in producing for and selling in a very large market, and lack of access to pools of labour with certain specialized skills. Moreover, in every country some proportion of secondary industry, for example, bricks and bakery products, is local in nature and is not too susceptible to foreign competition.

6. In most cases, Canadian companies in the secondary manufacturing field find that their keenest competition comes from the United States. A study *Canadian Secondary Manufacturing Industry* to be published under our auspices, contains estimates which indicate that in terms of real output per man-hour the performance of Canadian secondary manufacturing industry as a whole is perhaps 35% to 40% below that of the United States. Similar comparisons have been attempted with other industrialized countries such as the United Kingdom and Germany; these appear to show that the real output per man-hour of Canadian secondary manufacturing industries taken as a whole is very considerably higher than it is in those countries. The reasons for the substantially lower output per man-hour in secondary manufacturing industry in Canada than in the United States stem overwhelmingly from the disadvantages which accrue from the smaller size of the Canadian market, a market which averages only 1/15th that of the United States. These cost disadvantages manifest themselves in many ways. Overhead costs, including office and maintenance staffs, research, design and engineering costs, engraving, tooling and die costs, are proportionately higher in Canada. Because of the small market, manufacturers here are often unable to take advantage of the most efficient machinery which is economic only with very large runs. Canadian

Table XXI

OUTPUT AND EMPLOYMENT FOR SECONDARY MANUFACTURING INDUSTRIES IN 1953

	Gross Value of Production ¹ (\$ Millions)	Employees ² (Thousands)
Bakery products.....	\$354	40.3
Beverages.....	443	21.9
Miscellaneous food products.....	509	23.1
Tobacco products.....	214	9.5
Rubber products.....	291	22.6
Leather products.....	222	33.1
Textiles (excl. clothing).....	701	73.2
Clothing.....	858	120.1
Furniture.....	232	29.8
Other secondary wood products.....	117	12.9
Paper products (secondary).....	389	26.2
Printing, publishing, etc.....	544	66.5
Agricultural implements.....	171	14.2
Industrial & household machinery.....	385	40.6
Primary iron and steel.....	459	35.0
Other iron and steel products.....	1,083	98.5
Motor vehicles and parts.....	1,143	56.3
Railway rolling stock.....	338	35.5
Shipbuilding.....	183	22.6
Aircraft and parts.....	399	38.1
Other transportation equipment.....	26	3.7
Non-ferrous metals products (secondary).....	371	26.9
Non-metallic minerals products (secondary).....	300	29.2
Electrical apparatus and supplies (incl. electronics).....	848	76.9
Petroleum refining and coal products.....	823	17.1
Chemical products (secondary).....	626	36.6
Miscellaneous manufacturing.....	261	32.2
Total secondary manufacturing.....	\$12,290	1,042.6
Employment according to labour force data ²		1,090.0

¹ Gross Value of Production is based on the final factory selling prices of output and includes a substantial amount of double counting.

² The Census of Industry Employment figures on which this table is based do not cover the entire labour force in secondary industry; the labour force aggregate is somewhat more comprehensive and is more suitable for comparisons between sectors of the economy.

manufacturers also are unable in most cases to obtain the maximum advantages to be gained from specialization. Other disadvantages for Canadian manufacturers, although generally of less importance than those

stemming from the diseconomies of small-scale operations, include the higher costs of machinery and materials (in part due to Canadian tariffs), higher costs of transportation and distribution, the more rigorous climate, which adds to construction and heating costs, and, perhaps in some degree, differences in managerial skills and labour attitudes.

7. The considerable differential between Canada and the United States in real output per man-hour in secondary manufacturing is offset in part by the lower wages paid in Canada, amounting on the average to about 25%, and in some industries by lower profit margins. Tariff protection, the average rates of which are difficult to determine but which lie between 10% and 20% in most instances, is also an important factor in enabling Canadian manufacturers to compete with imports. In addition there are the natural and intangible forms of protection which assist domestic producers in any country. These include transportation costs, a modicum of bias sometimes shown in favour of Canadian products, and the quicker service and delivery usually obtainable from domestic manufacturers. It should be noted also that there is some evidence that productivity and cost differentials in some industries, including iron and steel, electrical equipment and automobiles, have narrowed somewhat, particularly during the past decade. This improvement is not uniform however and in other industries the gap may actually have increased.

8. The growth and competitive ability of Canadian secondary manufacturing industries have been greatly affected by our proximity to the United States and by the many corporate links which Canadian manufacturers have with United States firms. In the field of consumer goods the strong demand in Canada for United States brand name products has resulted in, or has been accompanied by, the establishment in this country of subsidiaries of United States manufacturers of such products. The close relationship with the parent has enabled these subsidiaries to offset some of the disadvantages arising from the smaller Canadian market. For example, their managements have had access to the parent companies' research, design and "know-how", and in many cases have also been able to secure capital readily. They have been able to purchase from their parent companies complex parts, which if manufactured in Canada would be substantially higher in cost because of the small market. In this and other ways the Canadian subsidiaries have been assisted in building up operations from partial assembly to full production. This parent-subsidiary relationship, however, has not been an unmixed blessing in all cases. In some instances corporate rivalries in the United States may have led to a more rapid expansion in the manufacturing facilities of subsidiaries than the Canadian market would appear to warrant. As a consequence, the division of the market among an excessive number of firms has accentuated the problems of short production runs for each and raised their costs.

9. The above analysis has been carried out largely in terms of the ability of Canadian secondary manufacturers to compete with imports from the United States, the main source of competition. With respect to imports from overseas countries the principal disadvantage faced by Canadian producers is not small-scale operations but higher wages. While wage levels in Canada are lower than in the U.S., they are much higher than in all overseas countries. This reflects our higher level of capital investment, more advanced manufacturing techniques, and higher output per man-hour in the economy as a whole. As is to be expected, overseas goods tend to compete most effectively in our markets with Canadian goods produced by relatively unmechanized processes, in which labour forms an important part of final costs. In general, it is only in such labour-intensive products as rubber footwear and certain textiles that the wage differential can make itself felt keenly enough to confer a significant advantage on overseas producers. There is little evidence of any sharp rise in overseas competition in other important products, because the generally high costs of overseas production combined with the strong preference of the Canadian consumer for North American products, the problems of distance, language, and servicing, effectively limit the incursions of the overseas manufacturer into this market on any considerable scale.

10. Secondary manufacturing in Canada has grown significantly in its relative importance to the economy as well as in absolute terms. During the decades of the twenties and the thirties, for example, this sector of the economy accounted for about 15% by value of the net output of the economy and employed about the same percentage of the civilian labour force. Since the war, when the level of activity was abnormally high, the net output of secondary manufacturing industry has remained fairly constant at about 22% of total net output. Employment also has been constant at very slightly less than 20% of the civilian labour force. In 1955, secondary manufacturing industries employed 1,050,000 persons, or 19.7% of the civilian labour force.

11. The future growth of secondary manufacturing industry in Canada will depend largely upon the size of the domestic market for its products and the share of that market which Canadian manufacturers are able to obtain. Exports will probably be of even less importance than in the past unless important changes take place in the commercial policies of other countries. It seems probable that the demand for secondary manufactures will increase at about the same rate as the anticipated increase in the Gross National Product. In this event, the total demand by 1980 may be close to three times what it is at present, although there will of course be important qualitative shifts in the demand for the products of particular industries within the secondary manufacturing group. As the Canadian domestic market grows relatively to the United States some

reduction may normally be expected in the present disadvantages resulting from the much smaller scale of operations in this country. This will not be true in some industries if, as a result of automation, the size of the most efficient plants becomes larger than would otherwise have been the case. But on balance it seems reasonable to assume that in competition with products of United States manufacturers Canadian industry will obtain a slightly larger share of the domestic market than it does at present.

12. On the other hand, it seems probable that the wage differential between North America and countries overseas will continue to widen, in which case the thrust of overseas competition may be expected to be increasingly severe in those products which have a high labour content. At the same time, however, the march of technical progress will tend to leave few products untouched by mechanization, either directly or indirectly, because machine-made competing or substitute products will become relatively cheaper in the future. In effect, products with a high labour content will become relatively less important and, at the same time, the share of the market for those products which Canadian manufacturers will be able to obtain will decrease.

13. In the future, as in the past, those industries which show an ability and a willingness to introduce new machinery and new techniques leading to improved productivity are likely to be the most successful in increasing their share of the market. Taking all factors into consideration it appears to us that the share of the total Canadian market obtained by domestic producers will increase slightly, and in consequence output of the secondary manufacturing sector will rise at a slightly faster rate than that projected for the economy as a whole. The secondary manufacturing industries' share of the net output of the economy in 1980 is expected to be of the order of 25%, somewhat higher than the corresponding percentage at the present time.

14. In the study of the secondary manufacturing industries referred to previously, some estimates are provided of trends in productivity and employment in these industries. Average annual increase in output per man-hour may be close to $3\frac{1}{4}\%$, compared with the range of $2\frac{1}{2}\%$ to $3\frac{1}{4}\%$ which we have used in our estimates of productivity in the business sector of the economy as a whole. On the basis of these figures, and allowing for the average reduction in hours worked referred to in Section 2, it is estimated that 25 years from now secondary manufacturing industries will employ about 1,900,000 persons, or about 20% of the much larger civilian labour force at that time.

15. Obviously not all secondary manufacturing industries will grow at the same rate. The structure of each industry will be affected by the change in pressures of demand and competition. Some will grow faster than the economy as a whole, others more slowly. We would expect that the fastest

growing industries will be electrical apparatus, electronics and chemicals. Primary iron and steel, industrial machinery, and oil refining may also show rates of growth considerably above the average, closely followed by rubber products and the non-ferrous metals products group. At the other end of the scale, the textile industry on the average is not expected to more than double its present output by 1980, while the rate of growth in railway rolling stock and shipbuilding may be somewhat less than this. Of course, the prospects for particular products will differ widely from the growth expected for any particular industry as a whole.

16. As the growth of the secondary manufacturing industry will be so dependent upon mechanization, expenditures on machinery and equipment will tend to rise at a faster rate than output, and all secondary industries will become more capital-intensive than they are today. Those in which capital is of most importance will tend to show the greatest rate of progress. It follows also that with the increasing importance placed upon capital equipment and the growing complexity of machinery and electronic devices to regulate it, there will inevitably be an increasing demand for skilled labour of all kinds, including technicians, engineers and scientists, as well as for administrative personnel of the highest calibre.

17. It is obviously important that manufacturing industries in which more than a million people or almost 20% of the total civilian labour force are employed at the present time should be encouraged and assisted in any reasonable way to be efficient and profitable. Having in mind the increasing need of secondary industry to mechanize its operations if it is to remain competitive, it is suggested that these industries be given the privilege of writing off over a very short period their capital investment both in buildings and in machinery and equipment. (While this is suggested to encourage secondary industry to keep its factory buildings and equipment modern and up to date, such provision could also be applied to other industries in Canada.) We believe that this would be a most useful and effective incentive for reducing costs and increasing the ability of secondary manufacturing industries to compete successfully with imported products. And as the capital assets of the industries in question can only be depreciated once for tax purposes, there should be no serious loss in government revenues over a period of years. Obviously, however, the timing of any measures intended to assist the manufacturing industries would be important. Such measures would need to be reconciled and integrated with other policies designed to stimulate or to restrict the level of economic activity throughout the country.

18. It would also be of considerable help in some manufacturing industries if large buyers, including all levels of government, the railways and public utilities, made a practice of discussing their prospective requirements and their capital expenditure programmes with their principal suppliers well in

advance of the actual placing of orders. Closer liaison of this kind would make possible a more efficient spacing of production and would lead to lower production costs. A rather extreme example of the alternative approach is the practice which the railways have followed in the past of buying new freight cars. Orders have been placed spasmodically with little regard to either long-term requirements or the capacity of the suppliers; these orders appear to have been dependent upon the buoyancy of railway revenues. When revenues have been depressed, the practice has been to place much smaller orders or to place no orders at all. This procedure has meant wide fluctuations in the volume of work carried out by the car manufacturers and in the volume of their orders for steel and other commodities. This inevitably has meant considerable swings in levels of employment in the industry with substantial numbers of people being laid off from time to time. It has meant also that excess capacity has been developed by the car manufacturers in order to handle peak volumes of business, which of necessity adds to their costs. This example has been used merely to illustrate the desirability of purchasers and suppliers co-ordinating their programmes in order both to reduce costs and to iron out fluctuations in the level of employment. Policies designed to improve the extent of this kind of co-ordination would undoubtedly produce valuable results.

19. In view of the growing size and complexity of Canadian manufacturing operations, it appears desirable to increase the number of officials in the federal government service having some detailed knowledge of manufacturing industry. In this way, liaison between government and industry would be improved and more information about the position and problems of the manufacturing sector would be available to the government. It may be that the Tariff Board, if provided with an enlarged and expert staff as suggested in the next section, would be able to perform this function. Alternatively, some other branch of government might be given this responsibility.

20. During the course of its public sittings, the Commission heard criticism expressed about the administration of the Restrictive Trade Practices Commission. No disagreement was expressed as to the necessity for appropriate monopoly control legislation. But the view was put forward that, contrary to the thinking of some years ago, size alone or agreements between companies may no longer necessarily be contrary to the public interest. To go further, it is the opinion of some responsible people that, with present industrial conditions and techniques, the restricted size of the domestic market, and the necessity for substantial capital investment being made in plant and equipment in order to reduce costs of production, it may be highly desirable for certain industries to be concentrated in fewer hands than is now the case. We did not undertake to examine either the present

monopoly control legislation or the manner in which it is being administered. However, in view of the strong opinions which were expressed on the subject, we suggest that at the appropriate time this whole matter might be restudied to ensure that our monopoly control machinery is well designed to promote the public interest, bearing in mind modern large-scale industrial production and the particular characteristics of the Canadian economy.

COMMERCIAL POLICY

1. LINKED closely to any study of Canadian secondary industry is the tariff and commercial policy. This subject is a difficult one for many people to discuss objectively. It has been a political issue of long standing; an issue which stirs regional interests, feelings and antagonisms. But quite obviously commercial policy involves problems on which this Commission should comment. Perhaps the best way of doing so will be first to recite what we believe to be the most significant facts and then to draw some conclusions from them:

- (a) To begin with, it is clear that Canada is now an important industrial nation. More than 25% of the total working force is employed in manufacturing at the present time; 20% is employed in secondary manufacturing. The expectation is that about the same percentage of an increasing labour force will be so employed in the future.
- (b) Every industrial nation has a tariff, and Canada is no exception. We have had a tariff since Confederation and the separate colonies had tariffs before that time. There have been fluctuations in the level or degree of protection but over the years these fluctuations have, with few exceptions, not been so very pronounced one way or the other. It seems apparent that tariff protection, at some level, will be continued.
- (c) It is not possible to make exact comparisons of the level of protection or of the quantitative effects of tariff restrictions in different countries. It is a fact, however, that Canada's economy is a relatively open one compared with that of other nations which have an important industrial base. The ratio of imports and exports to Gross National Product is relatively high in Canada.
- (d) Canada has played a leading part since World War II in tariff reductions, in international efforts to bring about a general reduction in tariffs and other trade restrictions, and in promoting a greater degree of freedom of trade on a multilateral basis. Both the average rate of

duty collected on dutiable imports and the average rate of duty collected on all imports into Canada have been reduced by approximately 25% since 1939. Such percentage comparisons may tend to exaggerate the actual measure of the reduction in protection which has taken place during the period. On the other hand, the percentages themselves do not reflect the decline in the real degree of protection which has occurred as a result of changes in the form and administration of the customs tariff in recent years. Certainly the reduction in protection afforded the textile and machinery industries since the war has been substantial and this has contributed to the considerable difficulties with which these industries have been faced.

- (e) There is no satisfactory way of measuring or estimating the true cost of the Canadian tariff in economic terms. It is possible to make comparisons of the prices of goods in Canada with world prices and to estimate what the differences attributable to the tariff amount to in total for all expenditures in this country. A comparison of this kind included in the Commission's study *Canadian Commercial Policy* which suggests that the differences in total might amount to perhaps 3½% of the Gross National Product is of some interest. But this is very different from any estimate of the true economic cost of the Canadian tariff. Many assumptions, the validity of which would be open to serious question, would be necessary in any such calculation. In our view it is not possible to make an accurate estimate of the economic cost of the tariff.
- (f) Similarly there is no satisfactory way of measuring or evaluating the advantages the nation gains from having domestic manufacturing industries which provide it with assured sources of supply for many commodities and which give the economy a measure of diversification and thus a greater degree of stability than it might otherwise enjoy. Obviously, these are real advantages even though they cannot be evaluated in monetary terms.
- (g) While it is not possible to determine the true economic cost of the tariff in its entirety, it can be stated with confidence that a moderate increase or decrease in the tariff would not have any appreciable effect upon the average standard of living in Canada. More than a moderate decrease would not seem to be a practical consideration unless alternative employment opportunities could be provided for the people who would be displaced from secondary manufacturing. And any substantial increase in the tariff would seem to be equally unacceptable to most Canadians.
- (h) The foregoing statements should be qualified by the obvious fact that secondary manufacturing industry is not evenly distributed over the country. One result of this is that the cost of the tariff bears more heavily on some areas than on others although it must be recognized

that the distribution of government revenues and some other deliberate measures of government policy, including subsidy payments, substantially offset this disparity.

2. While it is to be hoped, and in fact expected, that there will be some reduction in existing restrictions to world trade over the long term, there do not seem to be grounds for expecting this to happen in the more immediate future. The international atmosphere in these matters may change in time. In the meantime, it would not make sense for Canada to embark upon any general programme of tariff reduction on a unilateral basis. Indeed in a world where our main trading partners are not prepared to make worthwhile reductions in their tariffs and other trade restrictions it would seem sensible for this country, for the time being, to hold the tariff line, on the average, at about its present level.

3. At the same time we should take advantage of the opportunity to straighten out some of the anomalies which exist in the present tariff and to simplify the whole tariff structure as much as possible. No tariff is or can be constructed on a truly logical or scientific basis. But if we are going to have a tariff at all, and that seems both obvious and necessary in a practical sense, we might as well make it as tidy and as orderly as possible. It should also be flexible in the sense that we should not hesitate to amend and revise it as occasion demands from time to time. In fact we would advocate a continuing re-examination of the tariff having in mind continually changing industrial conditions, products and technology. In this connection, if, as previously suggested, the correct policy for Canada is to hold the present tariff levels on the average for the time being, any general revision of the tariff schedules will involve adjustments up as well as down in individual rates. In many cases such revisions would require international negotiation. While not expressing any views on the details of the various agreements by which international trade is currently regulated, we are firmly of the opinion that efforts to promote a stable commercial regime in the international field, under which adjustments can be made in an orderly manner, are very much in Canada's interest.

4. The task which would be involved in any general revision of the Canadian tariff would be an extremely large one, and, to be successful, it would need to be carefully planned and organized. Before the examination and revision of each section of the tariff is commenced, the government should instruct those responsible for such examination of the objectives or criteria which should govern them in their review. Such criteria might differ depending upon the industry or section of the tariff under study and perhaps depending to some extent upon the prevailing conditions of the day. The kind of criteria we have in mind, one or more of which might be applicable in some cases but not necessarily in others, would include such things as the number of people employed in the industry and those dependent upon it directly or indirectly; the relative stability of such employment and the

alternative opportunities in the areas where the industry is located; the level of the rates of duty and the effect of such rates on consumer prices and on industrial costs; and the reliability of alternative sources of supply. This list is intended to be illustrative rather than comprehensive in its coverage. In such a re-examination of the tariff, every effort should be made to reduce the number of separate items and to eliminate wherever possible both "end use" items and items "of a class or kind not made in Canada". New additions should be made to either of these categories only in exceptional circumstances. In the case of tariff schedules to be established for new industries or new products, those responsible for the examination should be instructed to take into account both the economic desirability of the new industry or product in terms of the Canadian economy as a whole and the possibilities of such industry or product being able to prosper without tariff protection or with a lower rate of protection once it became established. If the proposed examination and revision of the tariff were to be undertaken by the present Tariff Board, which would seem logical, that body would need to be strengthened quite considerably. To be specific it should be provided with an enlarged research staff competent to deal with the many and complicated problems that will be encountered. It might also be desirable to relieve the present Tariff Board of its responsibility for hearing appeals under the Customs Act and the Excise Tax Act.

5. Many submissions were made to the Commission during the course of its public hearings on the subject of "dumping". It is probable that this term is often used rather loosely and that at times it is applied to importations of goods at perfectly bona fide prices. At times in the past, in other cases, some domestic manufacturers would seem to have had justifiable cause for complaint about the value placed on imported goods for duty purposes. Prior to 1948, "dumping duty" could be levied if goods were imported at less than their cost of production, plus a reasonable percentage to cover the costs of distribution, overhead and profit. This left considerable discretion in the hands of the officials responsible for administering the customs legislation. It is alleged by some that customs appraisers were more critical in their examination of values prior to 1948 than has been the case since Canada became a signatory of the General Agreement on Tariffs and Trade and since the amending legislation was passed. It is a fact that the amount of anti-dumping duties has declined very considerably in recent years as a percentage of the total amount of duty collected. In this connection, it should be emphasized that the Customs Division of the Department of National Revenue has not a sufficient number of qualified investigators to do any appreciable amount of policing of values. If there have been cases of dumping, therefore, in the legitimate sense of the term, it has not been the fault of the relatively few officials employed on this phase of the work of the Department.

6. Established Canadian industries and the people employed by them should be safeguarded against importations of goods at dumped prices. Because predatory dumping is most likely to take place at times when industry in the exporting country is operating at less than capacity, special efforts to enforce the anti-dumping legislation should be made in such circumstances. With this in view, the Commission suggests that the Customs Division of the Department of National Revenue be authorized to recruit whatever staff may be required to investigate adequately this question of values for duty purposes. There should be no hesitation to use promptly the authority provided in the recently amended Section 35 of the Customs Act in order to prevent the dumping of goods from abroad at less than their fair market value. If the section referred to proves inadequate for this purpose, it should be strengthened.

7. It was represented to us that in some circumstances it might be necessary to take action to safeguard established Canadian industries threatened by a flood of imports at devastatingly low prices from countries where social conditions and the organization of production and trade are vastly different from those which prevail in Canada. Political instability in some parts of the world may contribute from time to time to difficulties of this kind. Safeguards might be particularly necessary if the prospective source of supply should not appear to be a reliable substitute for domestic production over the long term. In this connection it is worth noting that several recent trade agreements entered into by Canada include an escape clause against just such contingencies.

8. From time to time some Canadians are inclined to speculate about the possibilities of some broad measure of reciprocity with the United States, the objective of which would be to eliminate the restrictions on trade between the two countries. There is no reason to believe that United States authorities would be receptive to any such proposal, particularly if it implied the free entry into that country of the products of Canadian agriculture and fisheries at a time when there were very substantial surpluses of such products existing in the United States. But quite apart from that, it may be well to remind ourselves that Canada is now an important industrial nation and, as previously stated, one-fifth of our total working force is employed in secondary manufacturing industries. Some Canadian industries might prosper if they had free access to the American market but many others would probably not be able to survive in their present form or on any appreciable scale. It follows that, under present circumstances, any system of complete or even substantial reciprocity with the United States would entail an upheaval in the lives of a great many people in this country who would of necessity have to find employment in other occupations — in the United States, if not in Canada. The implications of such an upheaval would need to be carefully assessed before a policy along the lines referred

to could be considered seriously. This does not mean that we should eliminate completely any thought of reciprocal arrangements of more limited scope with the United States (or with other countries) consistent with Canada's international obligations. But, in the opinion of the Commission, broad reciprocity with the United States cannot now or in the foreseeable future be regarded as a practical proposition.

TRANSPORTATION

1. FOR A COUNTRY such as Canada, where a relatively small population is spaced out over vast distances, the costs of transportation must inevitably pose problems of a profound and continuing nature. The manner in which these problems have been dealt with in the past has had a direct influence on the binding together of the many regions making up the Canadian nation, and the way they are handled in future will undoubtedly affect our growth and our unity.

2. Many revolutionary changes have occurred in the transportation picture as a result of the advent of the automobile and, more recently, of the airplane. All forms of transportation have contributed and will continue to contribute immensely to the flexible working of the Canadian economy. Water carriers and pipelines can handle freight more cheaply in their respective and restricted fields, and the movement of freight by air may become more of a factor as the years go by. Except over long distances, highway trucking has advantages in the movement of many kinds of merchandise, particularly those of high value. In most instances, however, the railways can transport heavy volume bulk commodities more cheaply and efficiently than the trucking industry. For as long a time into the future as can be foreseen we must continue to expect the railways to carry most of this type of traffic. An efficient railway system is therefore a vital necessity.

3. The total volume of freight which the railways carry has increased steadily over the past few decades. It seems probable that the freight tonnage which will be handled by the railways will continue to increase, but a larger proportion of it likely will be represented by heavy volume bulk commodities carried at relatively low rates and a smaller proportion by high value merchandise which in the past has carried much higher freight rates. Moreover, the truckers' share of the total business has been increasing rapidly, from 1% in 1936 and 9% in 1949 to the present 13%. There is every reason to believe that the percentage of the total freight traffic which

is carried by truck will continue to increase and that the truckers' share of freight revenues will rise at an even faster pace.

4. The growth of highway trucking is a fact of the greatest importance to the railways. Competition from the trucking industry has cut, and will continue to cut, deeply into the most lucrative part of the railways' business. Although the railways continue to carry a high proportion of the total tonnage of freight, they receive a much lower proportion of total transportation revenues than the tonnage figures would indicate. In the past, because the railways were able to earn a relatively high rate of profit on moving high value merchandise, they were able to charge relatively low rates on low value bulk commodities. In the case of grain these low rates were, and still are, fixed by statute. About 30% of the total tonnage carried by the railways is represented by grain, on which the rates have been increased only very slightly since 1898. In the meantime railway operating costs have risen substantially.

5. Railway workers expect their wages to increase over the years with the increasing prosperity of the country and the rise in wages in other industries. Wages represent a high percentage of the total operating costs of the railways. Consequently, if wages increase without a corresponding increase in the productivity of railway employees, the railways can stay in business only if revenues are increased. In view of the nature of the industry, it seems doubtful if the output per man in the railways can rise at as rapid a rate as in the economy as a whole, although such programmes as dieselization have created some significant productivity gains in recent years. It is also unlikely that additional revenues arising from an increased volume of business will be sufficient to offset increased costs. Since the war, the railways have been granted permission to introduce horizontal increases in freight rates on eight separate occasions in order to offset increases in their operating costs. The total of the adjustments which have been allowed amounts to an increase of somewhat more than 100% over the rates prevailing in 1945. But if the freight rates are continually increased in any automatic fashion on high value merchandise, more of this traffic will be lost to highway trucking; and this will only accentuate the problems of the railways.

6. Additional revenue to meet rising costs could be obtained in three ways. First, the Board of Transport Commissioners might permit such increases in freight rates, mainly on high value merchandise, as could be made without loss of business to the railways. Second, rates on low value bulk commodities and particularly the statutory rates on grain could be increased. This is a matter on which many people hold extremely strong opinions, particularly in western Canada where the grain rates have become imbedded in the structure of the regional economy. We do not suggest that any change should be made now in these statutory rates. However, within the longer period, improvement in the world wheat situation and the growth of

livestock production in the prairie region may create conditions under which greater flexibility in grain rates could be introduced. Third, in lieu of an increase in the rates on low value commodities and, in particular, those on which the rates have long since been established by statute, the government could provide, in the form of a subsidy, such additional amounts as may be necessary to help meet rising railway costs and maintain the efficiency of the railway system. It is with no little hesitation we have come to the conclusion that a short-run solution to this intractable problem will probably involve a new charge on the public treasury.

7. As has already been suggested, the relative importance of road and rail transportation has been profoundly altered within the past 30 years. It seems probable that further shifts in the balance may be expected. One result may well be that when new areas are being opened up, road transportation may be judged preferable to new rail services. In such cases the railways should not be put under pressure to build new lines. Similarly, they should be given latitude to reduce the losses incurred on some existing lines. When the railways were the sole form of transportation it was necessary for them to operate services in sparsely populated areas even though this involved substantial losses. These losses could be offset by profits earned elsewhere. Under the changed conditions of today, however, it seems highly desirable that the railways should be permitted to abandon unprofitable branch lines and to discontinue other unprofitable services if other transportation is available to the public. If no other transportation is available, it would seem reasonable to permit the railways themselves to introduce bus lines and trucking services where this could be done at some saving to themselves, provided of course that the interests and requirements of the people residing in the areas affected were protected.

8. The annual expenditures on highway construction have been steadily mounting in recent years with the increasing number of automobile and truck registrations. In 1953, provincial government revenues from gasoline taxes and licence fees amounted to 89% of the expenditures on highways by provincial governments in that year. But these revenues amounted to only 64% of the total expenditures by federal, provincial and municipal governments on highways, rural roads and urban streets. Highway construction expenditures have continued to increase since 1953 and the expectations are that this trend will continue. As these expenditures are related in very large measure to the numbers, the speeds and the weights of the vehicles in operation, we suggest that the owners of these vehicles should be required to pay an even higher percentage of the total costs involved than they are doing at the present time.

9. In this connection, it should be emphasized that a substantial proportion of the increased costs is necessitated by the heavier construction of highways and bridges which is now required to accommodate the heavier classes of trucks. It is important, therefore, that studies be made to deter-

mine the taxes and licence fees which the owners of passenger vehicles and the operators of different classes of commercial vehicles should be charged respectively, having regard to the proportion of total costs which should reasonably be allocated to each of them. If the owners of vehicles in any category are paying less than their appropriate share, the owners of other vehicles may be paying more than their fair share. And if trucks in the heavier classes are being undercharged, this gives them a competitive advantage vis-à-vis the railways at a time when public subsidizing of railway revenues may be fast approaching. Quite obviously a situation of this kind makes little sense in terms of the most efficient use of our national resources.

10. There are many other questions in the field of transportation which are of very considerable importance. In Section 16 on the Atlantic Provinces we shall have something to say about the transportation problems of that area. In the Commission's study on *Transportation in Canada* reference is made to the requirements of the North Shore of the Province of Quebec, to the possible effects of the St. Lawrence Seaway and to the needs of some other areas. We shall comment on these matters in our final report.

PROSPECTIVE REQUIREMENTS AND SOURCES OF CAPITAL

1. IN THE postwar decade 1945 to 1954 total new investment in Canada amounted to about \$48 billion, which was 25% of the total Gross National Product for the period. Residential construction accounted for about one-sixth of the total investment in the ten-year period, non-residential construction for nearly one-quarter and new machinery and equipment for about one-third. Government investment and investment in inventories each accounted for about one-eighth of the total. This investment has been financed from a variety of sources, with personal savings providing 22% of the total; government surpluses and funds allocated to capital projects 23%; undistributed corporation profits and depreciation allowances 52%; and net capital inflows as reflected in the current account of the balance of payments 3%.

2. In the past few years there has been a change in the manner in which our capital requirements have been met. In the year 1955, when total investment was \$7 billion or 26% of the Gross National Product, personal savings financed 19% of total investment, government surpluses, etc. 17%, business savings 54% and the net inflow of capital 10%. It is estimated that in 1956 an even higher proportion of total investment was financed by the net inflow of capital.

3. It is not possible to estimate with any reasonable degree of accuracy what the total requirements for capital investment in Canada may be over as long a period as the next 25 years. Estimates or informed guesses can be made about the rate of expansion of particular industries and of industry in general which should give a rough indication of the total amounts of capital required for industrial purposes over the period. Similar guesses can be made about the capital investment which will be required for housing and agriculture. One can estimate somewhat arbitrarily the possible capital expenditures by governments on such things as highways, hospitals, schools and universities, most if not all of which will probably be paid for out of

taxes. But in our opinion it is not possible to make a realistic, precise compilation of all such estimates and guesses covering a period of 25 years. All that can reasonably be said is that if we are right in thinking that the Gross National Product in 1980 may be some three times as high as in 1955 then it is probable that the total amount of investment in 1980 will also be close to three times the 1955 figure.

4. Many of the witnesses who appeared before us expressed opinions about the capital market and a study of it is being prepared by members of the Commission's staff. It may be that after this study is completed we shall wish to be more specific in the opinions which we are prepared to offer. In the meantime we have certain tentative views about this important subject which we venture to express in the hope that they may provoke discussion. In this section we shall comment on the problems of financing investment in the private sector of the economy. In Section 15 we shall consider the financial problems of municipalities.

5. There does appear to be an inadequate supply of Canadian capital which can be readily mobilized for large-scale projects requiring a concentration of equity capital on which no immediate return may be expected. In this connection it was suggested to us by some responsible witnesses that the legislation restricting the kind of investments which may be made by life insurance companies and by trustees should be changed to allow more funds from those sources to be made available for investment in equities. Other equally responsible people expressed the view that trustees and institutions in a trustee position must pursue cautious policies in their investment programmes and that changes in existing legislation are not needed. Quite obviously it is the direct responsibility of trustees and of the managements of life insurance companies to decide how their funds should be invested and it may be that the policies of these companies are more significant than legislation in determining how much of their savings is invested in equities. The Commission believes, however, that some greater degree of flexibility in the legislation governing investments by trustees and by life insurance companies would be desirable in order to allow trustees and the managements of life insurance companies more freedom in exercising their judgment in the field of investments generally. In particular, we propose that:

- (a) The restrictions in the various provincial trustee acts upon the powers of trustees to invest in equities should be re-examined and modified.
- (b) The limitation of 3% on investments of life insurance companies which come under the so-called "basket clause" should be raised.
- (c) The 15% limitation on investments of life insurance companies in common stocks might also be raised.
- (d) The regulation respecting the valuation of common stock investments by life insurance companies should be changed to provide that any market depreciation below cost or book value may be amortized over

a period of years as compared with the present requirements whereby any decline in market value of securities must be written off each year as it occurs.

6. But even if changes along the above lines were made, it would not be possible for trustees and life insurance companies, even if they wished to do so, to provide all or even a substantial proportion of the capital which will be needed for equity financing in the years to come. If, therefore, Canadians are to invest in new large-scale ventures, it may be necessary to devise new mechanisms for concentrating available venture capital and for spreading the risks more widely. It seems clear that in addition a continued inflow of foreign capital will be needed for such purposes, particularly in periods of rapid expansion.

7. We have noted the difficulties of estimating Canada's total capital requirements over the next 25 years. It would be even more difficult to predict how much of the total we shall need to obtain abroad. Estimates have been published from time to time of the amount of foreign capital which has been invested in Canada over the years. Such estimates are difficult to make and it is even more difficult to present them in a way which will not be misleading. Estimates for any one year, particularly for a current year, are subject to error. Moreover there have been wide swings from year to year. Averages for a period of years, particularly for a long period, should be more accurate, although they may fail to disclose rising or falling short-run trends. These are important qualifications which should be kept in mind in connection with the estimates which follow.

8. It is estimated that the total amount of foreign capital invested in Canada increased by about 90% between 1945 and 1955 and at the end of the latter year amounted to about \$13.5 billion. This is not a large sum when considered in relation to the total amount of capital invested in Canada, the great proportion of which has, of course, been accumulated by Canadians. But this aggregate figure for foreign investment tells only part of the story. It is important to note that the rate of foreign investment has been increasing rapidly in the last few years. Moreover the recent trend has been for foreign capital to be increasingly concentrated in the resource and manufacturing industries while domestic capital is widely distributed throughout the economy.

9. There are several ways of looking at the contribution made by non-residents to the financing of investment in Canada. One approach is to show the extent to which Canada has drawn on the resources of other countries, on balance, and to compare this with total investment in Canada. This "net use of foreign resources" may be measured by the deficit in Canada's international transactions, plus undistributed profits of corporations controlled by non-residents minus undistributed profits of Canadian-controlled enterprises abroad. Another approach is to show the "gross use of foreign financial resources" and to compare this with total investment

in Canada. The "gross use of foreign financial resources" may be defined as new capital of foreign origin supplied to enterprises and governments in Canada.¹ In both of these approaches the use of foreign resources and investment in Canada may be measured with or without taking depreciation allowances into account. For our immediate purpose we shall exclude depreciation allowances from the estimates.

10. According to estimates published by the Dominion Bureau of Statistics, the net use of foreign resources as a percentage of total capital investment in Canada was about 25% in the five years 1926 to 1930. Similar estimates are not available for the years 1931 to 1945. For the four years 1946 to 1949 there was a net capital outflow. The net use of foreign resources as a percentage of total capital investment in Canada in the five years 1950 to 1954 was 13%. We estimate that the corresponding percentage for the period 1954, 1955 and the first half of 1956 would be about 25% and that the percentage for an even shorter recent period would be still higher.

11. The corresponding estimates of the Dominion Bureau of Statistics of the percentage of the gross use of foreign resources to total capital investment were about 50% in the five years 1926 to 1930; 21% for the four years 1946 to 1949; and 28% for the five years 1950 to 1954. Our rough estimate of the corresponding percentage for the period 1954, 1955 and the first half of 1956 would be about 33%. The percentage for the full year 1956 would be higher.

12. We are not able to make any definite prediction about the annual balances on our international current account transactions over the course of the next 25 years. We expect, however, that our exports will increase more than our imports and that by 1980 we shall be relatively less dependent upon new inflows of foreign capital than we are today. It is not impossible, in fact, that by the end of the period Canada will find herself in the position of being a net exporter of capital in an average year. This does not mean that by 1980 there will be no inflow of foreign capital for investment in Canada; there very likely will be, and this may be very much to our advantage. Nor does it mean that Canadian corporations controlled by non-residents will not continue to re-invest a substantial portion of their earnings in Canada. It means only that insofar as the annual balances on our international current account transactions are concerned, it is quite likely that ultimately the time will come when more capital will be exported from Canada than will flow in here during any one year.

¹ More precisely, this measure covers the inflow of long-term foreign capital plus the non-resident share of undistributed profits of foreign-controlled enterprises in Canada. Among the movements disregarded are the foreign funds supplied to Canadian capital markets as a result of security trading, and also resident and non-resident capital outflows from Canada. ("Gross use of foreign financial resources", as used here, is equivalent to the measure "direct foreign financing" used by D.B.S.).

13. We expect that during the next 25 years the amount of foreign capital invested in Canada will be increased considerably, in absolute but not in relative terms, both because of undistributed profits and depreciation allowances of foreign-controlled enterprises in this country and because of the inflow of new foreign capital. This additional foreign investment will be needed if the rate of Canada's expansion and development is to be carried on at a reasonable pace. If it is forthcoming we can see no serious obstacles or difficulties in the way of obtaining the total amount of capital which will be needed in the next two or three decades although, as previously suggested, some new mechanisms may be needed in order to facilitate the investment by Canadians in new large-scale ventures. Adequate supplies of capital may not be available, however, to sustain rapid expansion in periods like the present, when the rate of projected investment tends to exceed the rate of domestic savings plus inflows of foreign capital. Difficult questions may arise in connection with the rate of inflow of foreign capital over the years and more particularly in connection with the manner in which it is invested here and its high degree of concentration in certain industries. These issues will be discussed in the following section.

FOREIGN CAPITAL INVESTMENT IN CANADA

1. CANADA has always welcomed the investment of foreign capital and has benefited greatly and will continue to benefit from the foreign capital that has been invested here. To date Canada has not been able to generate enough capital herself to take care of all her requirements, including the requirements of the resource and manufacturing industries, during periods of rapid growth. It is obvious that without foreign investment the rate of growth and development in Canada would have been much slower.

2. Quite apart from the dollar value of Canada's capital requirements is the question of the quality and character of that capital. Capital is not a simple or uniform product; it embraces a number of complex properties both quantitative and qualitative in nature. Of the utmost significance in this context is the fact that many investment projects undertaken in a modern industrial economy require large pools of venture capital concentrated in the hands of a single or of a very few enterprises. This requirement is sometimes confused with the inherent willingness of a people to take risks. Some people think that Canadians are timid investors. This is probably not true. Canadians seem more than willing to purchase the relatively few well-established equity stocks available to them and many seem prepared to risk their money in speculative mining stocks with comparative abandon. The fact is, however, that there are not available in Canada to the extent required large pools of capital for long-term projects which involve risk and on which no return may be expected for several years.

3. No less important than the availability of adequate pools of venture capital is the extensive industrial experience and market connections which must be associated with that capital before a large investment undertaking can go ahead. This embraces such diverse requirements as an advanced technology, specialized entrepreneurial and managerial skills and, in many cases, an assured export market for a large part of the output. In recent years Canada has made significant strides in meeting these requirements out

of her own resources. The fact is, however, that they have not been available to the extent required to keep up with the very rapid pace of recent industrial expansion.

4. In effect, then, what Canada has required, especially in the course of her recent economic development, is a "package" of substantial capital, technology, skills and markets. It is this kind of capital package which non-residents have helped to provide, thereby performing vital tasks which Canadians alone could do either less efficiently or not at all. Outside capital has brought with it the management, the technical skills, the "know-how" and, in some cases, the assurance of markets so vital to the rapid growth of Canada. An example of this is the very considerable development of the Iron Ore Company in the Quebec-Labrador area, made possible because associated with Canadians in the venture was a group of American steel companies which were in a position to contribute not only a considerable part of the capital and technical knowledge needed but also to provide a market for the ore to be produced. It may be assumed that many new projects for developing resources in the future will only be possible under similar conditions.

5. It is the form which foreign investment has taken, particularly in recent years, and the way it has tended to be concentrated in certain industries which has led to the current discussion of the subject — a subject on which the Commission heard a great deal in the course of its public hearings. Over half of the total amount of foreign investment in Canada in 1954 was in the form of so-called direct investment¹ in the resource and manufacturing industries. Direct investment means for the most part investment in wholly or partially owned mines, timber limits, oil wells, leases and reservations, and in manufacturing plants, etc. It is the kind of investment which tends to be more or less permanent in character. It should be noted also that a considerable part of the increase in foreign direct investment in recent years has been accounted for by the retention or ploughing back of earnings by established concerns, many of which have paid only moderate dividends to their shareholders so far. It seems probable that this trend will be continued for some time to come.

6. The influence which foreign-controlled concerns exert in some industries may be greater than the percentages which the amount of foreign capital investment in these industries might imply at first glance. This is

¹ The publication of the Dominion Bureau of Statistics entitled CANADA'S INTERNATIONAL INVESTMENT POSITION 1926-1954 contains the following definition of direct investment and the statistical concept of control . . .

"The category of direct investments shown here generally includes all concerns in Canada which are known to have 50% or more of their voting stock held in one country outside Canada. In addition a few instances of concerns are included where it is known that effective control is held by a parent firm with less than 50% of the stock. In effect this category includes all known cases of unincorporated branches of foreign companies in Canada and all wholly-owned subsidiaries, together with a number of concerns with a parent company outside of Canada which holds less than all of the capital stock. In addition there are a relatively small number of Canadian companies included in cases where more than one-half of their capital stock is owned in a single country outside of Canada where there is no parent concern. These exceptional cases are confined to instances where control is believed to rest with non-residents."

because, in Canada, a relatively few large firms tend to predominate in many industries; and the influence which they exert in such industries may be pervasive and compelling. If these few large firms, or a majority of them, are controlled by non-residents of Canada, it may follow that the foreign capital invested in the industry, because of the way in which it is concentrated, in fact dominates or at least influences greatly the operations and the general conduct of the entire industry.

7. The more important Canadian industries in which a relatively few companies controlled by non-residents have a dominating influence include the oil and gas industry, some sections of the mining, smelting and refining industry (including, in particular, nickel, iron ore, aluminum and asbestos), some sections of the chemical industry and at least three of the more important secondary manufacturing industries, namely, automobiles, electrical apparatus and supplies, and rubber products. In the pulp and paper industry, ownership and control is more widely diffused. The nine largest companies account for 55% to 60% of the total production of this industry and of these nine, only three are controlled by non-residents. This is only part of the picture, however, because many of the medium-sized companies in the industry are controlled by non-residents. At the beginning of 1954, 55% of the total capital employed in the industry was controlled by non-residents and this percentage may have risen somewhat since then through the purchase of a number of formerly Canadian-owned companies by foreign interests.

8. There are, of course, many other industries of great importance in which the amount and influence of foreign capital is of much less significance. These include the primary iron and steel, food processing, textiles, transportation, public utilities and construction industries. The extent of foreign investment in agriculture is negligible. More than four-fifths of the capital invested in the chartered banks is Canadian. In other financial institutions such as the insurance companies and the loan and finance companies, the extent of foreign ownership and control is considerable but not dominant. It is true nevertheless that several of the industries which have been expanding and developing most rapidly and which, directly or indirectly, are contributing in a major way to the present high level of economic activity in Canada are either dominated or greatly influenced by companies which are controlled by people who reside outside our borders.

9. It may be useful at this point to say a word about the way in which foreign capital assisted in the development of the United States and of how this investment differed in character from the foreign capital which has been invested in Canada. The very substantial investment of British capital which helped to develop the United States in the 19th century was largely in the form of bonds which could be, and indeed were, repatriated at maturity. On the other hand, a large part of the foreign investment in

Canada is in the form of more or less permanent equity ownership. This type of investment has no maturity date and, in the ordinary course of events, is not repatriated. On the contrary, it tends to grow automatically with the normal growth of the country through the reinvestment of earnings, even in the absence of new capital inflows. Moreover, the fact that a large part of non-resident equity investment in Canadian industry is in the form of wholly-owned subsidiaries and branches means that Canadians are unable to participate financially even though the growth in incomes and the consequent increase in domestic savings will make it increasingly possible for them to do so. This, of course, is one of the causes of the concern which has been expressed in this country. The way is not open for Canadians to acquire any appreciable interest in many of those resources of the country which are held by subsidiaries of foreign concerns. Canada needs and wants foreign capital, but we should like to see more of it invested in such instruments as bonds and mortgages. And we should like to see that part of it which is invested in the resource and manufacturing industries associated in some degree with Canadian capital.

10. Foreign investment will probably continue to be highest in the resource and manufacturing industries, and it will continue to be concentrated in a relatively few companies. Although such investment is necessary for our continued growth, the resulting increased foreign ownership and control of certain industries may tend to create problems. It is quite clear from the evidence presented before this Commission and from public discussion that many Canadians are worried about such a large measure of economic decision-making being in the hands of non-residents or in the hands of Canadian companies controlled by non-residents. It is true that the companies in question are subject to Canadian laws and that foreigners who do business in Canada through the medium of unincorporated branches or Western Hemisphere Trade Corporations must also comply with the laws of this country. It is true also that there is little evidence to suggest that foreign-controlled Canadian companies are being operated in a way which is at variance with the best interest of Canada, but it is not axiomatic that this will always be the case. The men responsible for the management of any large corporation with interests in other countries, including Canada, must of necessity operate the whole enterprise in the interests of its shareholders. The activities of subsidiaries in other countries must be reconciled with, and subordinated to, the interests of the corporation as a whole. It is quite possible also that those in responsible positions in foreign parent companies with subsidiaries in Canada may not always be completely familiar with conditions in this country and with the views and opinions of Canadians.

11. It would, however, be both unfair and ungenerous to suggest that Canada has been hurt so far in these or other ways as a result of the foreign capital which has been invested in this country. As already stated, we have benefited greatly from such investment. Nevertheless if, as seems likely, the

present trend continues under which foreign investment in Canada is heavily concentrated in the resource and manufacturing industries, it seems probable that this will continue to cause concern in this country. And conceivably, if this proves to be the case, it could lead to actions of an extreme kind being taken at some future time. This is the problem — the question is what can or should be done about it?

12. The Commission puts forward the following objectives as being desirable for the operations of foreign concerns which do business in Canada through the medium of Canadian subsidiary companies, unincorporated branches, Western Hemisphere Trade Corporations, etc.:

- (a) Wherever possible, they should employ Canadians in senior management and technical positions, should retain Canadian engineering and other professional and service personnel and should do their purchasing of supplies, materials and equipment in this country.
- (b) They should publish their financial statements and make full disclosure therein of their Canadian operations.
- (c) The larger Canadian subsidiaries should sell an appreciable interest (perhaps 20% to 25%) in their equity stock to Canadian investors and should include on their boards of directors a number of independent Canadians.

Is it possible to accomplish these objectives? Canada has always been scrupulously fair in her treatment of non-residents who have invested their capital in this country. This is one of the reasons why foreign capital is attracted here. But most foreign investors will be aware of the discussion which has been going on about this subject and most people, including foreign investors, will probably agree that it is not the kind of problem which is likely to disappear just by hoping that it will go away. To do nothing about it may be the very worst decision which could be taken.

13. It does not appear that the first of the desired objectives cited above involves much of a problem. By and large, Canadian subsidiaries of foreign concerns do employ Canadians in senior positions whenever they can find qualified men to fill them. And there are many examples of people who have come here from abroad to manage Canadian subsidiaries of foreign concerns who have settled here permanently and have become useful and helpful Canadian citizens in every sense of the term.

14. The second objective is that foreign-owned concerns should publish or make available their financial statements showing the results of their operations in Canada. If these concerns, and more particularly the larger ones, were owned in Canada they would be required to supply copies of their financial statements to their Canadian shareholders and in this way if there were more than just a few shareholders, these statements would be made public. In many cases the parent concerns publish their own state-

ments in considerable detail in their own countries. It is not unreasonable, therefore, that Canadians should wish similar information about the activities of the subsidiaries in this country. In the absence of such knowledge, suspicions are bound to be aroused, no matter how unjustified they may be. The Commission does not propose that foreign-owned concerns operating in Canada should be forced to publish their financial statements. But it firmly believes that it might well be in their best interests to do so voluntarily.

15. The third objective is that the larger or well-established Canadian subsidiaries of foreign concerns should sell some part of their equity stock to Canadians and include a number of independent Canadian representatives of such investors on their boards of directors. Some companies have adopted this policy and have said that it has worked out well and to their advantage. But it seems improbable that similar policies will be adopted by the majority of such concerns unless there is some material incentive for them to do so.

16. Some incentives might be provided by changes in the income tax law. In this connection it may be noted that all companies and other enterprises doing business in Canada are entitled, in computing their taxable income, to make deductions for depreciation at rates which compare favourably with the corresponding rates allowed in other countries. Operators in the oil and gas industries are entitled to recover the full amount of their exploration and development costs before any part of their profits becomes subject to tax. New mines are exempted from paying any tax for three years and are not required during this period to amortize any part of their exploration and development costs. It was suggested previously that in addition to these benefits, certain new tax concessions might be granted to Canadian business concerns. One of these proposals which was made in Section 10 is that additional or special depreciation allowances might be granted to the secondary manufacturing industries or to companies in all industries in order to encourage them to keep their equipment and factory buildings modern and up-to-date. Another suggestion put forward in Section 9 is that companies in the oil and gas industries should be allowed to deduct the full amount of their property acquisition costs in addition to their exploration and development expenditures. It was suggested also that companies in these latter industries should continue to be granted an allowance for depletion and that it might be computed on a more favourable basis than the present one. (Or that, alternatively, they should be charged a lower rate of tax on profits earned in the production side of their activities.)

17. These suggestions for new and special tax concessions were put forward primarily with the object of assisting Canadian companies and Canadian businesses to compete successfully with their much larger competitors in other countries whose financial resources and research facilities

in many cases far surpass what is available in this country. With this in mind and if these suggestions for new and special tax concessions are accepted, it might not be unreasonable, in the opinion of the Commission, to make them conditional in their application to foreign-owned Canadian subsidiaries upon such companies, and more particularly the large or well-established ones, selling some part of their equity stock to Canadians and appointing independent Canadians to their boards of directors. There would be problems and difficulties to be overcome in any such plan, but we do not believe they would be insuperable. For example, some exception could be made in special cases for new ventures whose sponsors considered it would be unwise to invite public participation because of the uncertainties involved, and also possibly in the case of some smaller Canadian subsidiaries of foreign concerns which could not reasonably be expected to sell stock to the general public. Unincorporated branches of foreign concerns and Western Hemisphere Trade Corporations doing business in Canada might have the option of incorporating their businesses under Canadian laws and qualifying for the new and special tax concessions which have been suggested, or of continuing to enjoy whatever advantages they are at present entitled to under their existing forms of organization. This, incidentally, would tend to offset the advantages which certain foreign oil concerns, operating in Canada through the medium of Western Hemisphere Trade Corporations, enjoy at present vis-à-vis Canadian oil operators.

18. Another step which might be taken in the field of tax policy at some future time to encourage foreign owners of Canadian subsidiary companies to sell a proportion of the shares of such companies to Canadians would be a further revision of the withholding taxes on dividends payable to non-residents. Prior to 1956 the rate of withholding tax on dividends paid to non-residents was 15% except in the case of wholly-owned subsidiary companies. The rate was 5% if not less than 95% of the shares of a Canadian company was held by a foreign parent. It was alleged that this differential discouraged the sale to Canadians of any appreciable proportion of the shares of Canadian companies controlled by foreigners. In order to meet this objection, it has been announced that the Tax Treaty with the United States is to be amended to provide that the lower 5% rate of withholding tax will apply in future to dividends and interest payable by Canadian subsidiaries of foreign companies which hold less than a 95% interest in the Canadian company concerned. An alternative arrangement would be to charge a higher rate of withholding tax on dividends paid to non-residents by Canadian companies unless an appreciable percentage of the equity stock of such companies is held by Canadian investors.

19. The granting of applications for mining rights, oil leases and timber limits is the responsibility of the provinces under the Canadian constitution. With this in mind, the Commission suggests that provincial governments might well consider requiring foreign applicants for such rights in future

to incorporate under Canadian laws and to take in Canadian partners. We suggest that the federal government take similar action with respect to the Northwest Territories and the Yukon. Such action might help to accomplish the third of the objectives which the Commission has put forward as being desirable.

20. Foreign ownership of the stocks of the Canadian chartered banks and of life insurance companies, which are incorporated under Canadian law, is not particularly large at the present time. It is desirable that Canadian control of these institutions be maintained. The Commission suggests, therefore, that appropriate action be taken to prevent any substantial measure of control of the chartered banks and of the life insurance companies from coming into the possession of non-residents. One way in which this might be accomplished would be to provide by statute that any shares in such institutions which were acquired by non-residents of Canada in the future would be ineligible to vote. This restriction should not be applied to existing non-resident holders of such shares.

21. It would be incomplete to leave this subject of investment of foreign capital in Canada without a reference to the operations of the international labour unions in this country. To a very considerable extent, organized labour in Canada has developed in the form of local branches of the various international unions having headquarters in the United States. The international headquarters provide research and other facilities, and in many cases are empowered to approve or disapprove strike action decided upon by the locals. In many cases, however, the Canadian locals and their Canadian directors exercise a very wide measure of autonomy and there is no evidence to suggest that the international organizations exercise their authority or operate in a way which is detrimental to Canadian interests. In this connection, it is significant that the charter of the new Canadian Labour Congress includes a clause to the effect that it is an autonomous organization. No doubt the Canadian Labour Congress will maintain the closest possible liaison with the newly merged A.F.L. - C.I.O. in the United States, but the trend in organized labour in Canada would seem to be moving in the direction of more independence and more local autonomy.

MUNICIPAL REQUIREMENTS AND FINANCING

1. THE GROWTH of population that is expected will lead to increased requirements for housing and for various forms of social capital such as roads, schools, hospitals and waterworks, for which governments at the various levels have either complete or partial responsibility. Many of these requirements will be concentrated in the municipalities. Sewer and water systems are peculiarly urban phenomena; so for the most part are concert halls, juvenile courts, technical colleges and elevated expressways. Farmers, too, need roads, schools and other facilities, and they need them more than they used to; but it has been in the cities and their surrounding areas, gathering to them an ever larger proportion of the total population, that the needs for social capital have tended to grow the fastest.

2. Social capital requirements over the next two or three decades will be the greater because in many Canadian cities and towns these facilities are at present inadequate. If they are to be brought up to standards that are nowadays considered reasonably satisfactory, and if provision is to be made for increasing population, large sums of money will have to be spent. Although it is difficult to estimate the total expenditures that may have to be made over the next 25 years on housing and the various forms of social capital, they may well amount to nearly \$100 billion at present prices. Expenditures of this magnitude, in our opinion, are well within the capacity of the Canadian economy to sustain, if it expands at the rate we anticipate. But if the task is to be accomplished in a manner that will best serve the welfare of the Canadian people, the problems of planning, of jurisdiction and of finance will require more attention from all levels of government and from citizens generally than they have usually been able to command in the past.

3. In particular, we have been impressed by the need to regard all the problems of urban development as a single whole. Housing developments cannot be considered in isolation from the problems of providing the neces-

sary streets, sewers and other services for them. Traffic plans have to be related to estimates of population growth and car ownership, so that there will be proper circulatory systems for our cities and towns. The relationship of new residential and new industrial areas, as well as the relationship of the suburbs to the centre of the city, require co-ordinated examination. If the urban expansion that is inevitable is to avoid the errors of the past, more thought will have to be given to the total environment in which an increasing proportion of Canadians will spend their lives.

4. New approaches and new forms of municipal organization may be needed for satisfactory solution of some of these problems. In some cases the area of jurisdiction may be too small to permit the comprehensive planning that will be required; and larger patterns of various types may increasingly commend themselves to the citizens of our larger towns and cities. It will also prove desirable to attempt more radical surgery on some of the slum districts that still disfigure many of our metropolitan areas. Efforts to cure these blighted sections may well involve planning on a larger scale and of a more flexible kind than has hitherto been undertaken.

5. Nor can it be forgotten that at the core of this process of urban expansion lie intensely human problems which sometimes assume a rather different form in large cities than they do elsewhere. The needs of families and the solitariness of individuals will give rise to social problems that can in part at least be met by the provision of recreational and cultural facilities. Of the greatest importance, for example, are our young people's needs for supervised playgrounds, community centres and the like. We feel confident that in the future these social problems and the measures designed to relieve them will increasingly receive the attention which they deserve. However, in most cases, solutions will be dependent upon the provision of adequate finances. And until the problems of municipal finance can be met more satisfactorily, little progress is likely to be made with the personal aspects of these varied questions. For this reason, the comments which follow will be restricted to the financial side of the problems of the municipalities.

6. The dollar total of net municipal debt outstanding has increased considerably between 1946 and 1955, partially reflecting the deferment of expenditures during the war. The burden of this debt is, however, considerably below the prewar level if expressed as a proportion of personal disposable income (i.e. net income after payment of income taxes); the percentage in 1955 was less than half the level of 1939. Debt charges also form a considerably lower proportion of municipal expenditures, declining steadily from 16% in 1939 to 8% in 1946 to 6½% in 1955. Under the circumstances, it would not be unreasonable for municipalities, or at least a good many of them, to increase their long-term borrowings in order to finance some of the capital expenditures which need to be undertaken. Municipalities would be assisted in this connection if provincial legislation were enacted to permit them to issue non-serial debentures (although it may

be wise to require them to make regular sinking fund deposits with the provincial authorities). Concurrently, municipalities should be encouraged to market debentures with considerably longer terms than is at present the case. It might assist municipalities to some extent if the present 15% withholding tax on bond interest, payable in Canadian currency to non-residents, were removed. (It is to be noted that the withholding tax does not now apply on interest payable on foreign pay bonds.)

7. Municipalities are largely dependent for current revenues upon real estate taxation. As a percentage of personal disposable income, real estate taxes have declined from 5.75% in 1939 to 3.77% in 1955. Although it is true that other levels of government are taking a much higher proportion of total personal income than before, it appears that there may be scope for some municipalities to increase their revenues by increasing either their assessments or the tax rates which they levy on real property. (In this connection, the collection of real estate taxes might be facilitated if municipalities were to adopt the practice of issuing tax bills on a monthly basis.) It is suggested also that senior levels of government should accept the principle of an assessment on federal and provincial properties in order to compensate the municipalities for the services which they provide. It was represented to us that an annual tax on motor vehicles would undoubtedly be a substantial revenue producer in the larger municipalities. As a very considerable part of the expenditures for streets, parking facilities and the like are necessitated by the increasing number of motor vehicles, a tax on this form of property seems to be a reasonable way to increase municipal revenue.

8. In addition to increasing their borrowings where this can be justified and increasing current revenues in one or more of the ways referred to, it is important that municipalities should impose adequate charges to cover the costs of specific services. For example, there seems to be no good reason why industries and householders in each municipality should not pay the full costs of the municipal water supply and sewage disposal, services which might well be combined for costing purposes.

9. Finally, we believe that there is need for a more clear-cut definition and agreement about the functions and facilities which should properly be the responsibility of the municipalities to perform and to provide. Clearly this is a matter for the provinces to determine. But the majority of Canadians will be increasingly concerned in the years to come with the problems of urban living and if the financial difficulties of the municipalities are not dealt with satisfactorily these problems undoubtedly will become more acute. We believe that if the various suggestions put forward in the preceding paragraphs were implemented and if the municipalities were relieved of financial responsibility for hospitals and some social services, for example, their financial problems would be reduced to much more manageable proportions.

10. Representations were made to us about the growth of problems in rural municipalities resulting from the shifts of population from farms to cities. In some provinces the problem is being tackled by merging a number of rural municipalities. But it seems probable that the problems will differ, both in their nature and in their scope, from one province to another, and that a solution which may be appropriate in one part of the country may not be the best way of handling the problem in another. In the Commission's opinion, this is the kind of problem that should be worked out between the rural municipalities concerned and their provincial governments.

THE ATLANTIC PROVINCES

1. WE SHALL restrict our comments here to the problems and the difficulties with which the people living in the four Atlantic Provinces must contend. In our final report we shall have something to say about a number of the other regions or parts of Canada where the difficulties to be overcome in raising the income levels of the people are greater than in others.

2. About one and three-quarter million Canadians, or over 10% of the total population, live in the Atlantic region. It is well known that the rate of economic progress in the three Maritime Provinces — Nova Scotia, New Brunswick and Prince Edward Island — was relatively slow for a long period of years. However, in the last few decades, these provinces have made substantial progress. Over the past 30 years, for example, real income per capita in the Maritimes has increased at a somewhat higher rate than the average for the other provinces of Canada. Between 1926 (the first year for which figures are available) and 1955, personal income per capita in constant dollars increased by 94% in the Maritimes. This compares with an 80% improvement on the average in the six other provinces. Comparable statistics are not available for Newfoundland prior to 1949, the year she entered Confederation. However, per capita net incomes in that province increased by 20% between 1949 and 1955 in constant dollars, which compares with an increase of 12½% in the same period for Canada as a whole. It may be necessary to qualify these figures to some extent in assessing recent growth in the Atlantic region but nevertheless they would seem to be significant.

3. It is a fact, however, that average incomes in this region continue to lag behind the averages for the rest of Canada. In 1926, for example, the average income per capita in the three Maritime Provinces was 38% below the average for the other six provinces; in 1939 the corresponding percentage was 32%; in 1946 it was 24%; and in 1955, 33%. In 1955, the average income for the Atlantic Provinces, including Newfoundland, was

37% below the average for the other six provinces. This is not to suggest that comparative income statistics are a true reflection of differences in the real standards of living in different parts of Canada. Many people in the Atlantic region would not exchange on any terms their more peaceful way of life and the comparative ease and quiet that goes with it for the noise and the bustle and the tenseness which one associates with living in large metropolitan areas like Montreal, Toronto and Vancouver. Furthermore, these comparative figures ignore notable differences in the size of families in the different regions; and figures for income per family can throw almost as much light on average levels of welfare as figures for income per head. When income figures are computed on a per family, rather than per capita, basis, the disparity between the Atlantic region and the rest of Canada becomes less apparent. In 1955 income per family for the Atlantic Provinces was 31% below the average for the other six provinces, compared with a disparity of 37% on a per capita basis. If these figures are broken down still further between metropolitan centres and rural areas we find that the disparity is reduced again. In 1955, average family incomes of people living in metropolitan centres in the three Maritime Provinces were only about 15% below those of average family incomes of city dwellers in the rest of Canada. (The corresponding figure for Newfoundland would be 25%.) Similarly, the difference in average family incomes of people engaged in commercial farming in the Atlantic region when compared with average family incomes of people engaged in similar occupations in Ontario, for example, would be less than the disparity in the average per capita figures. The greatest differences in average incomes occur in the rural areas of the Atlantic Provinces where economic activity is associated with subsistence farming combined with part-time fishing and logging. People with low incomes who are engaged in these pursuits exist in every province but the condition is much more widespread in the Atlantic region. The prevalence of this type of economic activity in the Atlantic region is the main reason for the continued lag in average incomes per capita in that area as compared with other parts of Canada.

4. But despite these qualifications, the fact remains that living standards are lower in the Atlantic Provinces than they are in the rest of Canada, and that it is in everyone's interest to reduce this differential if it is at all possible to do so. It is not suggested that this should be accomplished by *ad hoc* projects and handouts. Such measures are as unpalatable to the recipients as they are to those who must foot the bills. What is required is a positive and comprehensive approach to the problems of the Atlantic region. With this as the objective, it is suggested that the people of Canada as a whole might be willing to assist the people of the Atlantic Provinces in discovering, developing and making the best use of resources in that area.

5. If it should turn out that there is not the necessary combination of resources in sufficient quantities to permit a substantial rise in living

standards in the Atlantic region, generous assistance should be given to those people who might wish to move to other parts of Canada where there may be greater opportunities. But even if assistance is provided for those people who might be willing to move elsewhere, many people undoubtedly would prefer to remain where they are, despite the handicaps referred to. People who so choose should at the same time be prepared to accept a different kind of life, or certainly life at a different tempo, and lower levels of income, though not necessarily a lower standard of living in its broadest sense, than people in certain other parts of Canada.

6. It is clear that there is no single or simple solution to the problems of the Atlantic region. Any serious attempt to raise income levels in the Atlantic Provinces will soon break down into consideration of a series of problems which must be dealt with separately and individually. These include problems of transportation and communications; problems other than transportation which, while national in their incidence, perhaps deserve some priority of treatment in the Atlantic region; the special problem of the Nova Scotia coal industry; other problems which are peculiar to one or other of the Atlantic Provinces, the solution of which may be dependent upon some measure of financial assistance from the people of Canada as a whole; and matters which come within the general administrative competence of the federal government or its agencies on which favourable decisions could provide some modest measure of assistance to one or other of the Atlantic Provinces.

7. We received many representations about the inadequacies and the costs of transportation facilities in the Atlantic region. It was claimed that the benefits originally obtained under the Maritime Freight Rates Act have been largely nullified as a result of the succession of rate increases which have gone into effect since the war. A system of trunk highways was said to be badly needed, in part at least so that highway truck competition may have a deterrent effect upon further rate increases by the railways. But it was claimed that the provinces' share of the costs of the trans-Canada highway is beyond their financial competence. It was suggested that a toll road of some 125 miles across the State of Maine — in a line between Fredericton, N.B., and Sherbrooke, P.Q. — which might be constructed for perhaps \$15 to \$20 million, would reduce the highway distance from the Maritimes to the Montreal market by some 100 miles. An alternative proposal suggested to us was for the Canadian Pacific Railway to introduce a "piggy-back" service on their Montreal-McAdam route at rates which would compare favourably with potential truck competition. It was stated that the ferry services to Prince Edward Island are unsatisfactory and should be replaced by a causeway from Cape Jourimain, N.B., to Borden, P.E.I., which, according to tentative estimates, could be constructed at a cost which if amortized over a period of years would bear favourable comparison with the present annual deficits of the ferries. If at the same time the railway

service on the Island were replaced by a trucking service operated by the railway and the losses presently incurred were taken into account, this project might have even more in its favour, it was contended. It was argued that additional port facilities are required at Saint John, Halifax and St. John's, Newfoundland; that greater efforts should be made to persuade Canadian exporters to use these facilities; and that perhaps greater incentives should be offered to them to do so. The submissions which we received in Newfoundland emphasized the great change which has occurred in the direction of the freight traffic of that province since it joined Canada in 1949 and complained that the present services for handling such traffic through Sydney and Port aux Basques have proved completely inadequate. One suggestion that was made for improving the situation was that a new steamship service should be established from Halifax to St. John's, but no estimates were submitted of the costs involved or of the effects which this diversion of through traffic would have upon the revenues of the Newfoundland railway, on which substantial losses have been incurred. It was made clear to us that perhaps Newfoundland's greatest single need was a greatly expanded system of roads in order to open up the resources of the province and also to establish communication between the centres of population and at least some of the potentially more accessible outposts. It was suggested also that there may be a need for improved shipping facilities between Newfoundland and Montreal.

8. It seems evident that the transportation facilities of the Atlantic region are in need of improvement but it was not possible for us to undertake the kind of detailed study of the problem necessary in order to make positive proposals about the most appropriate measures which should be taken in order to provide solutions. Quite obviously the costs of improving the various services should be carefully estimated and considered and care should be taken to avoid the introduction of duplicate facilities with consequent increases in total expenditures. It would be unwise to spend large sums on the construction of highways merely for the purpose of forcing a reduction in railway rates by the introduction of highway truck competition and thus increasing the present losses of the railways. It would be equally unwise to insist upon the continuance of unprofitable rail services if, with the construction of road facilities, the present traffic could be handled effectively by trucks and buses. The whole question of an improved, but integrated, system of transportation in the Atlantic region should be examined carefully and in detail, with proper consideration being given to the costs involved in providing any new facilities and to the losses being incurred in the operation of existing services. The Commission suggests that this should be the subject of a special inquiry which should also include in its terms of reference a re-examination of the present effects of the Maritime Freight Rates Act. We urge that the proposed inquiry be under-

taken promptly and that upon its completion, the measures required to improve the present situation be taken without delay.

9. Among suggestions to meet other problems which, though national in their incidence, might receive priority of treatment in the Atlantic region should be included that of an expanded programme of geological surveying. A relatively high proportion of this region has already been mapped, compared with the rest of Canada. But if the suggestion for stepping up this work is accepted, it might be reasonable to suggest that the part of the Atlantic area which has not yet been covered should be given a high priority in the expanded programme.

10. Another proposal which might perhaps be started in the Atlantic area is the suggestion for a land-use classification scheme, coupled with a programme for consolidating the holdings of small farmers where this may be possible. In many instances the land or some of it might best be used for forestry rather than for agricultural purposes. Any land-use classification scheme should be coupled with the provision of assistance to people who may be willing to move to other areas and to re-establish themselves in other industries. To be successful, such a scheme would require the continuous and wholehearted co-operation both of the provincial governments and of the people concerned. It should be introduced gradually and important results should only be expected to be achieved over a period of some years.

11. The question of the Nova Scotia coal industry requires special attention because of the importance of the industry to the economy of the province and because of the considerable number of people who are dependent either directly or indirectly upon the industry for their livelihood. Costs of production have been high, and for many years the industry's continued existence has depended largely on subsidies provided by the federal government. These subsidies have been designed primarily to promote the sale of Nova Scotia coal in the Montreal and eastern Ontario markets, where 40% of the output of the Nova Scotia mines is sold. For some time the competitive position of Nova Scotia coal in these central Canada markets has been deteriorating, and the markets have been retained only by increases in the rate of subvention. Prospects are that competition in this area from alternative fuels will be intensified, particularly when natural gas becomes available. In addition, it is estimated that when the St. Lawrence Seaway is completed the costs of moving competitive United States coal into the Montreal area will be reduced. Furthermore the outlets for Nova Scotia coal in the Atlantic region itself are declining, in part because of the growing use of imported crude and residual oils and in part because of the dieselization of the railways. These market developments have important implications for future employment in the industry.

12. With some governmental assistance the principal producers of coal in Nova Scotia are carrying out an extensive programme of mechanization. It

is expected that this programme will be completed in 1960. It is estimated that the mechanization of the mines will result in a substantial increase in output per man-hour. This means, according to estimates contained in our study on *The Nova Scotia Coal Industry*, that if there were no reduction in employment an additional 2 million tons of coal would be produced each year. On the other hand if production is not increased the services of some 4,000 of the 11,000 mine workers presently employed will not be required.

13. It is expected that the mechanization programme will lead to lower costs (although its effects may be offset in part at least by increased wages) and to the extent that it does so the competitive position of the industry will be improved. Despite this, it seems probable that if the basis of the present subsidy remains unchanged, the amounts paid in subsidies would have to be increased considerably before very long if present markets in the Montreal and eastern Ontario areas are to be maintained. However, the most logical market for Nova Scotia coal would seem to be the Atlantic region. We suggest therefore that the emphasis of the present subsidy arrangements should be modified in order to give priority to the greatest possible use of Nova Scotia coal in this region. We believe that changes in the present subsidy arrangements should include incentives designed to encourage the use of Nova Scotia coal in the generation of thermal power in the Atlantic region. The basis of the present subsidy on overseas shipments might also be reviewed to advantage in view of the marked growth of world trade in coal. But obviously there must be some limit to the amount of assistance which should reasonably be given to any one industry, no matter how important it may be.

14. We believe, however, that generous assistance should be provided for the mine workers who will be displaced as a result of the difficulties which we foresee. Special measures will be needed for looking after these people and for re-establishing in other industries those who may be interested in such an alternative. It may be that such measures could be included under a broad national scheme referred to in the discussion about agriculture in Section 3 for relocating people who may wish to abandon sub-marginal farms and be re-established in other industries. But the problem of the Nova Scotia coal miners and their families is a particularly difficult one which will require both a sympathetic approach and special treatment. We suggest that on economic grounds alone, having regard to the amount of the present subsidy, there would be every justification for paying the full amount of the transportation costs of all the members of any families who may be willing to move to other parts of Nova Scotia or elsewhere in Canada; for assistance in the provision of housing; and for training for other occupations, possibly in co-operation with industry.

15. There are a number of other problems which are regional, rather than national, in their incidence, but the solutions to which will require substantial capital expenditures. These include the provision of additional

power resources in New Brunswick and the various suggestions for improving transportation facilities which have been referred to previously. In part, at least, some of these projects might be self-liquidating. It is alleged by the sponsors of others that their capital cost would be more than offset by savings in current operating costs over a period of years. No doubt there are other no less convincing arguments which could be advanced in favour of each of the projects which have been proposed from time to time. However, the federal government would find itself in a difficult position if it became receptive to all demands and suggestions of this nature which were made upon it. On the other hand, the desirability of granting some measure of capital assistance towards the construction of public projects, including improved transportation facilities, in the Atlantic Provinces is apparent. Specifically it is suggested that the federal government should agree to contribute a fixed sum per annum for capital assistance for a term of years, on the understanding that the initiative in the actual allocation of these funds, including the determination of priorities, should come from the Atlantic Provinces themselves. Under this proposal, some kind of joint Capital Projects Commission would be established with an appropriate staff. With the advice and support of the four provincial governments concerned, this body would be responsible for examining all proposals for projects requiring capital assistance, for deciding upon priorities and, within the limits of the total amount of funds available, for submitting recommendations to the federal authorities. If some such procedure were approved, it would be important for the joint Capital Projects Commission to work closely with the appropriate permanent officials of the four Atlantic Provinces and to consult with the governments concerned before determining priorities.

16. The establishment of the army camp at Gagetown, New Brunswick, will undoubtedly result in very substantial benefits to that province in the years to come. There may be a number of other matters which, while of relatively lesser importance, might be handled in a way which would help one or other of the Atlantic Provinces. To begin with, it is suggested that a greater measure of decentralization of government purchasing policies would be beneficial to local areas. This might be particularly true in the case of New Brunswick and Nova Scotia, where the defence forces have considerable establishments. Similarly, if it should prove possible to place a greater number of defence orders with manufacturing concerns in the Atlantic region without substantially adding to costs, the resulting benefits might more than justify the additional effort and perhaps inconvenience involved. Then too, as previously suggested, if the railways were able to work out their purchasing programme more evenly over a longer period, this would be of great benefit to the car manufacturing industry in Nova Scotia and help to stabilize employment in that area.

IMMIGRATION

1. IN THE 30-year period 1901-31 about 4,600,000 immigrants came to Canada, and about 3,400,000 emigrated from this country. It does not necessarily follow that the numbers of immigrants and emigrants are related to one another, but it is significant perhaps that the net addition to the population in the first 30 years of the century as a result of immigration and of emigration was only some 1,200,000 people. The rate of emigration from Canada exceeded immigration during the decade of the thirties and both immigration and emigration were unimportant during the war period. In the five years beginning June 1, 1946, 460,000 immigrants came to Canada and another 770,000 people came here in the next five years, 1951-55, which makes a total of 1,230,000 in this ten-year period. Emigration is estimated at 580,000 in this ten-year period, which left a net addition to the population of 650,000 people as a result of immigration and emigration. The numbers of immigrants fell off considerably in 1955, partly because of news of the 1954 recession in Canada, partly because of improved economic conditions in Western Europe, and partly because the supply of certain types of people who have been moving to Canada since the war may be declining.

2. From time to time some people seem to be inclined to question whether the increase in population represented by immigration, or by net immigration after deducting emigration, has contributed very much to the economic development and prosperity of the country. In particular they question whether net immigration has made much, if any, difference to the average level of personal incomes over the years. While such questions may be understandable enough, particularly at times when the level of economic activity slackens off, it is the opinion of the Commission that immigrants have made a decided contribution to the scale of economic development in Canada. This is true in aggregate terms because of the addition that immigrants have made to the available labour supply. It is equally true in

qualitative terms when one considers not only the relative mobility of immigrants and their willingness to accept the types of work that are less attractive, but also when one thinks of the various skills and cultural accomplishments with which many immigrants are helping to enrich our Canadian life. It is our firm belief that it is in Canada's interest to continue to encourage people from other countries to emigrate here in order both to assist and participate in the development of our country and also to contribute further variety to our social organizations and institutions.

3. If it is to be successful, Canada's immigration policy must be a continuous, long-term one. It may become increasingly difficult to attract the immigrants that our expansion during the next 25 years appears to require and our immigration policy is unlikely to be successful if attempts are made to turn the tap off and on from time to time except in unusual circumstances. Under present circumstances the policy of not subsidizing people to come to this country seems reasonable. Helping them to finance their transportation costs through loans is another matter and should be continued. The Immigration Service should be extended sufficiently to permit a wider dissemination of information in the various countries from whence we may expect future immigrants to come, with particular emphasis upon the facts about living conditions in Canada. If necessary, the Immigration Service should be strengthened also to facilitate quicker processing of applications of those people who wish to come to this country. The policy of not placing restrictions upon the occupations in which immigrants may be entitled to engage should be continued. But the importance of encouraging immigrants with special skills can hardly be exaggerated under present circumstances when we are faced with serious shortages of trained people of many kinds.

4. Everything possible should be done to help immigrants upon arrival to fit into Canadian life and to become assimilated. We have no specific proposals or recommendations to make in this connection except to suggest that this is a matter of the greatest importance about which all Canadians should be prepared to assume some measure of responsibility. It is not a subject which can or should be left entirely to our government representatives to look after.

5. It is difficult to suggest how we should go about encouraging our own citizens, and particularly our better educated citizens, to stay in Canada. No doubt as more opportunities for highly qualified people become available here, and this is happening all the time, there will be less reason for well-trained Canadians to seek employment in the United States. It is true that salary scales are higher across the border than they are in Canada and, as long as this condition lasts, many Canadians will be attracted southward. But many others have sought positions in the United States in the past, not because of the higher salaries which can be obtained there — which may in part be offset by the additional costs which have to be incurred — but be-

cause they have not been able to find work in their chosen fields in Canada. It seems probable that this difficulty will tend to adjust itself in the years to come. Young Canadians go abroad for further training and become aware of the employment opportunities in the country in which they are studying. They are not kept similarly informed of opportunities in Canada. Effective means ought to be taken, perhaps through the universities, to keep in touch with them, and through collaboration between the National Conference of Canadian Universities, the Executive and Professional Division of the National Employment Service and industry associations, to keep them informed of employment opportunities in their chosen professions in Canada.

REQUIREMENTS FOR TRAINED MANPOWER

1. CANADA is living in a highly competitive world in which the pace of growth and development depends largely on the ability to use the fruits of scientific research, technological improvement and advanced mechanization. In such a world the abilities of scientists, engineers, administrators and skilled people of all kinds are being called increasingly into play. If Canada is to continue to grow and develop at its recent rapid rate it is of the utmost importance that adequate numbers of trained and skilled manpower of all descriptions be available. Today, however, Canada is facing shortages in almost every skilled occupation. Statements to this effect were made to the Commission repeatedly during the course of its public hearings. Furthermore, the shortages are expected to get worse, particularly in the immediate future; the number of new entrants to the labour force is increasing more slowly than the population, reflecting the low birth rate of the thirties.

2. The problem breaks down essentially into two parts, the need for people with specialized skills which can only be acquired in technical schools or through practical experience in industry and the requirement for university graduates with advanced training. During the last 25 years, and particularly since the beginning of the war, the demand for technical and skilled personnel has grown sharply. The increase in the proportion of the civilian labour force represented by technical and skilled personnel (not including professional personnel) is illustrated in Table XXII which is taken from the study *Skilled and Professional Manpower in Canada 1945-1965* prepared for us by the Department of Labour. In that study, skilled workers are defined as those who have had a minimum of two years training or equivalent experience. Clerical and agricultural workers are not included. It is expected that the demand for skilled workers will continue to increase.

3. During the period 1941 to 1948, again in 1951, and more recently in 1956, there were shortages of skilled workers in Canada. In the period 1952 to 1955, the demand for skilled workers was met by the greatly in-

Table XXII

ESTIMATES OF SKILLED WORKERS IN THE CIVILIAN LABOUR FORCE

(See text above for definition of skilled workers)

	Civilian labour force	Estimated number of skilled workers	Estimated number of skilled workers as a percentage of civilian labour force
1931.....	4,105,000	423,000	10.3%
1941.....	4,417,000	504,000	11.4
1946.....	4,862,000	625,000	12.9
1951.....	5,236,000	748,000	14.3
1956.....	5,670,000	892,000	15.7

creased immigration of skilled workers to Canada in the previous years. The net immigration (after deducting emigration to the United States) of skilled workers since the end of the war has been as follows:

Table XXIII

ESTIMATED NET IMMIGRATION OF SKILLED WORKERS, 1946-56

	Immigration	Emigration to United States	Net immigration
1946.....	2,438	1,308	1,130
1947.....	7,694	1,556	6,138
1948.....	13,645	1,657	11,988
1949.....	8,008	1,483	6,525
1950.....	5,343	1,561	3,782
1951.....	28,170	2,173	25,997
1952.....	19,146	2,970	16,176
1953.....	17,663	3,224	14,439
1954.....	18,287	3,008	15,279
1955.....	10,990	3,316	7,674
1956.....(est)	11,600	3,500	8,100

This immigration has contributed greatly to the growth of the economy, and these workers have brought with them a rich variety of skills and experience. However, the number has dropped off in 1955 and 1956 and it is not expected that net immigration of skilled workers for a number of years will exceed the level of about 8,000 persons per year.

4. While efforts should be made to encourage skilled workers to migrate to Canada, it seems improbable that we will be able to meet the still increasing skilled manpower requirements from immigration in the future as we have done in the recent past. It is, therefore, important that increasing

numbers of young Canadians coming into the labour force be trained to perform the growing number and variety of tasks requiring substantial degrees of skills. Unfortunately, unless present trends are changed, there will not be enough young men and women enrolling in training programmes to meet the demand. This is in spite of the fact that the number of Canadians entering the labour force will substantially increase over the next ten years. It follows that we may expect to face shortages of skilled labour in the near future.

5. This situation is not likely to correct itself automatically, except to a very limited degree. The pay differentials between skilled and semi-skilled workers are normally not great enough to provide strong financial incentives for people to take specialized training. Furthermore, while it is sometimes possible to substitute new machinery for certain types of skilled workers, it is much more common to substitute machinery for unskilled and semi-skilled workers, thus increasing, in effect, the demand for skilled workers.

6. If the problem is to be solved, it will be necessary to approach it from several different angles. The following suggestions are put forward as examples of the sort of action that we believe should be taken:

- (a) Pay differentials might be increased between groups of skilled workers where shortages are likely and semi-skilled and unskilled workers in the same industries. Also, added incentives might be offered to encourage apprenticeship in the skilled trades.
- (b) Existing technical and vocational training facilities and institutions should be expanded and new ones established. A large portion of this will occur as part of general high school expansion programmes now being planned by the provinces. But, in addition, it is important that more technical training schools for high school graduates be established. The advantages of training at the post high school level are that it gives young people more time to make up their minds about a career, that it is more suitable to highly specialized training (e.g. electronics) that requires some grounding in science and mathematics, that it will help relieve the pressure on the universities to give what are, in effect, technical training courses, and that training at this level is likely to be more intensive and efficient than at the high school level. It is quite apparent that the demands of modern industry for many new types of skilled technical workers cannot be met by the older techniques of apprenticeship and on-the-job training (although these are still important). Good technical education in a formal sense has become a necessity because of the technological changes that have taken place in recent years, and it is imperative that the present facilities for such education be greatly expanded.
- (c) Governments may play a role in fostering apprenticeship or in-plant training programmes, but it is to be hoped that skilled tradesmen's

groups and companies will themselves foster the further development of these training techniques. There is some evidence that some larger companies are becoming concerned about this problem and have instituted formalized training programmes of their own.

- (d) In many cases, more efficient use could probably be made of skilled personnel in industry by making sure that they are not being employed to perform unskilled or semi-skilled tasks which could be performed by others.

7. The number of students at present enrolled in the primary and secondary schools throughout the country is clear evidence that the numbers who will be seeking to enter the universities will increase rapidly within the next few years. In fact, university enrolments are already increasing; it is expected that the rate will accelerate and that enrolments will be double their present numbers by about 1965. This means that Canadian universities and colleges have little time in which to expand their present physical facilities and to recruit the additions to their teaching staffs that will quite obviously be required.

8. This brings us to the heart of the problem. How are the universities going to be able to attract increased numbers of men and women of high quality to the teaching profession? University salaries have barely kept pace with the changes which have occurred in the price level since prewar days. Living standards of university teachers, especially of those in the higher ranks, have not increased with the general prosperity of the country as a whole. In fact, they have declined, and declined substantially, in relative terms. The median salaries paid by Canadian universities in 1955 to assistant, associate and full professors in the three Maritime Provinces, in central Canada and in the four western provinces were as follows:

Table XXIV

MEDIAN SALARIES OF UNIVERSITY TEACHERS IN CANADA BY REGIONS, 1955

	Maritimes	Central Canada	Western Provinces
Professors.....	\$4,865	\$7,507	\$7,131
Associate Professors....	4,393	6,091	5,945
Assistant Professors....	3,816	4,911	4,842

These salaries do not bear comparison with the scales of remuneration which able men can command in business or in the professions or even with the earnings of some skilled workmen.

9. It seems quite clear that if our Canadian universities are to attract sufficient numbers of men and women of the highest quality to their teaching staffs, measures will have to be taken to improve the general standing in the

community of the university teaching profession. What is needed is a very substantial increase in the salaries of university teachers, and particularly of those in higher ranks. This could be accomplished at a cost which would be small in comparison with the sums which are at present being paid by our governments, or which people are demanding should be paid, for such things as roads and highways, power developments, railway extensions, docks and port facilities, agricultural price supports, increased social security measures and so on. Undoubtedly all these things are highly desirable. But in any plans for increasing the economic prospects of Canadians, a high priority should be given to improving our institutions of higher learning.

10. The total annual cost of all salaries paid to assistant, associate and full professors in Canada at the present time, including deans and heads of departments, is about \$12 million. As already stated we believe that it is important that the salaries of university teachers be increased very considerably. Half measures will not suffice if the very real problem which lies ahead in the almost immediate future is to be tackled successfully. If the present level of salaries were increased by 50% the universities would need additional revenues of \$6 million. If salaries were doubled they would need an additional \$12 million. Very much more than these amounts will be required however within ten years, by which time it is estimated that student enrolments will be twice their present number. If the numbers on the teaching staffs of the universities are increased correspondingly, the total cost of all salaries of assistant, associate and full professors, including deans and heads of departments, by 1965 might be \$36 million or \$48 million. On these assumptions, the universities would need additional annual revenues ten years from now of between \$24 million and \$36 million in order to provide for increased salaries for the present members of their teaching staffs and to pay the salaries of the additional members who will be required.

11. If salary scales are increased substantially, and if the whole status of the university teaching profession in Canada is raised and improved, it should become increasingly easier to persuade young Canadians of high quality to enter the teaching profession. Furthermore, it should be possible for Canadian universities to attract to their ranks Canadians and others who are at present teaching in United States colleges and, in addition, a number of scientists and scholars from Europe and elsewhere. What is being suggested in essence is that a deliberate and sustained effort be made to raise the quality and standards of Canadian universities to among the highest prevailing anywhere in the world. It is perhaps not going too far to suggest that no other single course of action would be so likely to have such an important and fundamental effect upon the long-term economic prospects for Canada.

12. In addition to the sums required for increased salaries, the existing universities and the new universities which will soon be needed will require

substantial capital grants, if they are to take care of the very large increase in the anticipated enrolment. It is estimated that capital expenditures of about one billion dollars will be required for these purposes over the period of the next 25 years.

13. It is of the greatest importance also that no Canadian boy or girl of ability should be denied a university education because he or she is unable to afford it. University costs are quite obviously going to increase considerably, and it would seem reasonable to expect that some part of this increase should be recovered through an increase in student fees. This should not be done, however, unless adequate provision is made through a combination of scholarships, bursaries and student loan funds to take care of those students who require financial assistance.

14. It is not the responsibility of this Commission to recommend how the financial problems of the universities should be solved. It is our duty, however, to point out most emphatically that it is vitally important to Canada's future for the status of our universities to be improved and strengthened, and for their facilities to be increased. To accomplish this, as already noted, an additional \$24 million to \$36 million per annum may be required within ten years for increased salaries for present and new members of the teaching staffs, and another \$40 million per annum on the average will be required for capital expenditures over the 25-year period. Further funds will be required for increases in other operating costs, but in part at least these will be offset by additional revenues from fees and other sources. It is quite beyond the capabilities of the universities themselves to raise these very considerable sums without direct and substantial aid from the governments concerned. In this connection it must suffice for us to express the strong opinion that no government which bears any share of responsibility for the future economic development of this country can allow a solution to the pressing financial problems of the universities to go by default.¹

15. Some limited measure of assistance might be given to the universities by increasing the amount of the deductions from taxable income now allowed to individuals and corporations for donations to educational institutions. This would not mean much by way of reduction in government revenues, but might be of some importance in the case of some universities. Amendments might be made also in the Federal Succession Duty Act to permit the deduction of gifts to universities and colleges from estates before the rate of tax is computed.

¹ Since these words were written, the Prime Minister has announced that Parliament will be asked to double the present federal grants to the universities, and to approve the transfer of a fund of \$50 million to the proposed Canada Council out of which the universities will be assisted in their programmes of capital expansion over a period of ten years.

CONCLUSION

1. AS WE stated at the beginning, it has not been possible in this preliminary report to do more than summarize our main estimates and conclusions. In our final report we propose to discuss much more fully the various trends which we have identified and the various assumptions on which the estimates are predicated. We will describe in considerably more detail the reasons which have led us to our conclusions about the rate of growth of the different sectors of the economy and of individual industries. We will review the reasons and the difficulties which cause the rate of economic development in some parts of Canada to be slower than in others. We will discuss the important role which government policies can play in stimulating and maintaining a high level of employment as well as the limitations of these policies. At the same time we will discuss the effectiveness and the limitations of government policies designed to control the rate of economic activity in Canada. We will also comment on the probable long-term trend in our international trading accounts and balance of payments.

2. This report has of necessity placed considerable emphasis on problems, actual and potential, and possible ways of dealing with them. These problems will be seen in better perspective in our final report, in which much more space will be given to description, explanation and qualification than has been possible in this shortened version of our findings.

3. In this preliminary report we have forecast a very considerable economic expansion for Canada in the next 25 years. This of course is contingent on the assumptions set forth in the introduction to this report. If a global war is avoided, and if the other assumptions we have made are substantiated by events, we expect that over the period the total output of the economy will about triple. This should bring about a remarkable increase in living standards and in the levels of per capita net disposable income. We shall

have our dull periods in the future, as well as our bright ones. But given leadership, flexible policies, a willingness to change policies as occasion demands and a bit of luck, Canadians have every reason to look forward with optimism and confidence to the continued economic development of our country and to a rising standard of living in the years to come.

ALL OF WHICH WE RESPECTFULLY SUBMIT FOR YOUR
EXCELLENCY'S CONSIDERATION.

W. E. Gordon

Chairman

Mer Leiser

R. E. Peanes.

Alfred Howard

R. M. Shue

D. V. LePan,
Secretary and Director of Research

December 3, 1956.

Appendix A

THE ORDER IN COUNCIL

P.C. 1955-909

*Certified to be a true copy of a Minute of a Meeting
of the Committee of the Privy Council, approved by
His Excellency the Administrator on the 17th June, 1955.*

The Committee of the Privy Council have had before them a report from the Prime Minister stating that it is desirable that the Canadian people should be more fully informed of the long-term economic prospects of Canada, and that it is in the national interest to initiate, examine and publish studies of Canada's economic potentialities, including developments in productive capacity, the growth and distribution of the population, the direction and nature of our internal and external trade, progress in standards of living and expanding requirements for industrial and social capital.

The Committee, therefore, on the recommendation of the Prime Minister, advise that:

Walter Lockhart Gordon, Toronto, Ont.;
Omer Lussier, Quebec, P.Q.;
Albert Edward Grauer, Vancouver, B.C.;
Andrew Stewart, Edmonton, Alta.; and
Raymond Gushue, St. John's, Nfld.

be appointed Commissioners under Part 1 of the Inquiries Act (Chapter 154 of the Revised Statutes of Canada, 1952) to inquire into and report upon the long-term prospects of the Canadian economy, that is to say, upon the probable economic development of Canada and the problems to which such development appears likely to give rise, and without limiting the generality of the foregoing, to study and report upon:

- a) developments in the supply of raw materials and energy sources;
- b) the growth to be expected in the population of Canada and the changes in its distribution;

- c) prospects for growth and change in domestic and external markets for Canadian productions;
- d) trends in productivity and standards of living; and
- e) prospective requirements for industrial and social capital.

The Committee further advise:

1. That the Commissioners be authorized to exercise all the powers conferred on them by Section 11 of the Inquiries Act;
2. That the Commissioners adopt such procedure and methods as they may, from time to time, deem expedient for the proper conduct of the inquiry and sit at such times and in such places in Canada as they may decide;
3. That the Commissioners be authorized to engage the services of such counsel, staff, clerks and technical advisers as they may require at rates of remuneration and reimbursement to be approved by the Treasury Board;
4. That the officers and employees of the departments of the Government of Canada render such assistance to the Commission as may be required for the inquiry;
5. That the Commissioners be directed to report to the Governor in Council; and
6. That Walter Lockhart Gordon be Chairman of the Commission and Douglas V. LePan be Secretary and Director of Research.

R. B. BRYCE,
Clerk of the Privy Council

Appendix B

ACKNOWLEDGEMENTS

THE BROAD nature of our task necessitated reliance on the assistance which could be made available by busy Canadians in many walks of life. That our efforts have begun to bear fruit is due to the interest and co-operation of governments at all levels, of universities, of business, labour, professional, agricultural, social and other organizations, both national and local, and of the many individuals who took time from the rush of their daily activities to contribute the information, the opinions and the suggestions upon which the Commission's report must be based.

We have journeyed across Canada, conducting hearings in all of the provinces and travelling through much of the Yukon and Northwest Territories and Labrador. Everywhere we were met with kindness, consideration and assistance and we should like to thank the very many people whose hospitality we were privileged to enjoy. Most of the 330 submissions which we received were presented to us during the course of our hearings. These submissions represent a contribution of inestimable value to our work. Prepared by provincial and municipal governments, by organizations and individuals engaged in all types of economic activity in the country, the generally high quality of these submissions provided us and our staff with a broad, yet detailed, view of the prospects and problems which may be expected in Canada's future development. It is our hope that all those who spent long hours in the preparation of these submissions in addition to their day-to-day routine have found the exercise to be of value to them and will realize the great importance which we attach to their contribution to our task. We are no less indebted to the more than 750 witnesses who appeared during the course of public hearings to present submissions and to give us the benefit of their views on probable developments within their particular fields of interest. We were most fortunate in obtaining publicly the views of provincial premiers, members and officials of their governments, of mayors and municipal officials, of outstanding representatives of business,

industry, labour and of educational, social and other organizations. Many of those who appeared before us did so at real inconvenience to themselves not only in time but also in travelling considerable distances to give us their views. To all those who appeared before us and contributed so fully and frankly to our work the Commission is extremely grateful.

We should like to thank the governments of the provinces of Newfoundland, Ontario, Manitoba and Saskatchewan and the responsible authorities in the cities of Halifax, Charlottetown, Fredericton, Edmonton, Calgary, Victoria and Quebec, as well as the University of Toronto and the President of the Exchequer Court of Canada for the fine arrangements which were made for the conduct of the hearings. We would also like to express our gratitude to the members of the press and to the news personnel of radio and television stations whose reporting of our activities has been most fair and whose suggestions have at all times been of value.

Complementing the public side of our inquiry we have had prepared a number of studies in which prospective developments in various sectors of the Canadian economy are examined. In this work we also relied upon the assistance of a large number of organizations and individuals. Many of those who presented submissions were approached by members of our staff for additional information on various phases of our work. Many industrial associations and particular companies in various fields have been most helpful in providing the information necessary for us to formulate our conclusions. Without exception, all of our inquiries have been met with sympathetic consideration and the utmost in co-operation. The many federal government departments and agencies which have provided information in connection with our studies have also been most co-operative in meeting our requests fully and promptly. We would particularly like to acknowledge our debt to Mr. Herbert Marshall, the Dominion Statistician, to Mr. S. A. Goldberg, Assistant Dominion Statistician, and to the many members of the staff of the Dominion Bureau of Statistics, whose work in collating available material and preparing special statistical series has formed the basis for many of the studies. Their kindness and co-operation have not only facilitated, but indeed made possible, much of the work which we have undertaken.

Quite a number of the studies which are listed in Appendix C were prepared for the Commission by organizations and individuals who were not members of its staff. The names of these organizations and individuals appear in the appendix. To all of them we express our grateful thanks. In particular we are very deeply indebted to a number of organizations, which we shall refer to individually, which prepared studies for us, using entirely their own research personnel and without charge to us. Both of the predecessors of the Canadian Labour Congress have prepared studies for us. The former Trades and Labor Congress of Canada has contributed a study on *Labour Mobility*, and the former Canadian Congress of Labour,

a study on the *Probable Effects of Increased Mechanization in Industry*. The Canadian Bank of Commerce has contributed a study on *Industrial Concentration*; The Bank of Montreal a study on *The Service Industries*; The Bank of Nova Scotia a study on *The Canadian Primary Iron and Steel Industry*; and The Royal Bank of Canada a study on *The Canadian Construction Industry*. A study of *The Canadian Automotive Industry* has been provided by The Sun Life Assurance Company of Canada. Mr. J. Grant Glassco, F.C.A., of Clarkson, Gordon & Co., has contributed a study on *Certain Aspects of Taxation Relating to Investment in Canada by Non-Residents*, and J. D. Woods & Gordon Limited has contributed a study on *The Canadian Agricultural Machinery Industry*. A study on *Skilled and Professional Manpower in Canada, 1945-1965* has been prepared by the Canadian Department of Labour, while the Fisheries Research Board and the Economic Service of the Canadian Department of Fisheries have prepared a study on *The Commercial Fisheries of Canada*. To all of these who contributed so much at considerable expense to themselves, the Commission would like to express its gratitude publicly.

The large task which has been ours would have been impossible without the very capable staff we were fortunate in assembling on short notice through the co-operation of governments, universities and other organizations which permitted members of their staffs to join in our endeavours. We would like to express our thanks to the University of Toronto for making available the services of Prof. Wm. C. Hood, to McGill University for the services of Prof. Irving Brecher, to the Ontario Agricultural College for the services of Prof. W. M. Drummond, to l'Université Laval for the services of Prof. Yves Dubé, to the University of Alberta for the services of Prof. W. Mackenzie and Mr. L. E. Poetschke, to the University of British Columbia for the services of Prof. Anthony Scott, to Queen's University for the services of Prof. D. W. Slater and to Yale University for the services of Prof. J. H. Young. We are grateful to the Standard Railway Equipment Manufacturing Co. (Canada) Limited for permitting Mr. J.-C. Lessard to serve as Transportation Consultant and to the St. Lawrence Seaway Authority, which kindly deferred work Mr. Lessard was to have undertaken at the time he agreed to assist us. We are also indebted to the government of the Province of Nova Scotia for making available to us Dr. R. D. Howland; to the International Monetary Fund for letting Mr. R. V. Anderson join our staff; to the United Nations organization for the services of Mr. G. T. McCollm; to the Canadian and Catholic Confederation of Labour for the services of Mr. Maurice Sauvé; and to Harris & Partners Limited for permitting Mr. D. H. Fullerton to serve on our staff. We should also like to express our gratitude to the Railway Association of Canada which permitted Mr. W. G. Scott to contribute to the study on *Transportation in Canada*, as well as to the Canadian National Railways for the services of Mr. J. D. Howe and to Trailmobile Canada Limited,

which permitted Mr. Arthur F. Hailey to participate in this study. We are also indebted to the Canadian Pulp and Paper Association for the services of Mr. J. M. Smith, not only in connection with the study on *The Outlook for the Canadian Forest Industries* but also in preparing a study on *Canadian Economic Growth and Development from 1939 to 1955*; to the Canadian International Paper Company for the services of Dr. D. A. Wilson in connection with the study on the forest industries; to the Canadian Federation of Agriculture which permitted Dr. E. C. Hope to assist in preparing the study on *Progress and Prospects of Canadian Agriculture*; to Central Mortgage and Housing Corporation for the services of Mr. J. V. Poapst; and to Clarkson, Gordon & Co. for the services of Mr. M. A. Mackenzie. In addition, we should like to acknowledge the assistance provided by the many Canadian Government departments which made available members of our staff on a full or part-time basis. Particular thanks are due to the Bank of Canada for putting at our disposal the services of several members of its research department and for affording us much further help and advice.

We are very grateful to the Queen's Printer and to the Bureau of Translation for their close co-operation in the large task of publishing our report and studies.

Finally, we should like to acknowledge the very competent work done by the staff of the Commission including the research, administrative, secretarial and clerical personnel. Their patience and persistence throughout many long hours has permitted us to accomplish in some measure the task that was set before us.

We wish to make special mention of the services of Dr. John Davis, Mr. D. H. Fullerton, Professor Wm. C. Hood and Mr. S. S. Reisman, the four Assistant Directors of Research. Dr. Davis was responsible for the various studies made of the resource industries and of the primary manufacturing industries. Mr. Fullerton was responsible for the studies made of the secondary manufacturing industries. Professor Hood was responsible for the statistical framework of the inquiry, and in particular for the main aggregate forecasts. Mr. Reisman was responsible for the various studies made of Canada's international economic relations. In addition to these broad responsibilities, all four of the Assistant Directors made other contributions of great value to the work of the inquiry as a whole.

We are grateful to Major N. A. Lafrance, our Administrative Secretary, to Mr. J. B. Claxton, our Counsel, and to Mr. W. A. MacKay, Assistant Secretary to the Commission, who were responsible for making most of the arrangements for the hearings. They were extremely thoughtful in dealing with the problems of transportation and accommodation, and in arranging the order in which the witnesses should appear. We are also

grateful to Mr. Maurice Sauvé, Assistant Secretary to the Commission, for helping to arrange the hearings in Quebec and Montreal and for supervising the work of translating our voluminous documents.

Finally, we wish to express our appreciation of the fine work done by Mr. D. V. LePan, who has filled the double post of Secretary and Director of Research and about whom much of the work of the Commission has revolved. Mr. LePan, by his industry, patience, and good humour, his sound judgment and rare intelligence, has made a contribution of the highest order, for which we express our deep gratitude.

**STUDIES FOR THE COMMISSION
TO BE PUBLISHED SEPARATELY**

- Output, Labour and Capital in the Canadian Economy —
by Wm. C. Hood and Anthony Scott
- Canadian Energy Prospects —
by John Davis
- Progress and Prospects of Canadian Agriculture —
by W. M. Drummond and W. Mackenzie
- The Commercial Fisheries of Canada —
by The Fisheries Research Board and The Economic
Service of The Department of Fisheries of Canada
- The Outlook for the Canadian Forest Industries —
by John Davis, A. L. Best, P. E. Lachance,
S. L. Pringle, J. M. Smith, D. A. Wilson
- Mining and Mineral Processing in Canada —
by John Davis
- Canadian Secondary Manufacturing Industry —
by D. H. Fullerton and H. A. Hampson
- The Canadian Primary Iron and Steel Industry —
by The Bank of Nova Scotia
- The Canadian Automotive Industry —
by The Sun Life Assurance Company of Canada
- The Canadian Agricultural Machinery Industry —
by J. D. Woods & Gordon Limited
- The Canadian Industrial Machinery Industry —
by Urwick, Currie Limited
- The Canadian Electrical Manufacturing Industry —
by Clarence L. Barber
- The Electronics Industry in Canada —
by Canadian Business Service Limited
- The Canadian Primary Textiles Industry —
by National Industrial Conference Board (Canadian Office)

- The Canadian Construction Industry —
by The Royal Bank of Canada
- The Canadian Chemical Industry —
by John Davis
- The Service Industries —
by The Bank of Montreal
- Probable Effects of Increasing Mechanization in Industry —
by The Canadian Congress of Labour, now
The Canadian Labour Congress
- Labour Mobility —
by The Trades and Labor Congress of Canada, now
The Canadian Labour Congress
- Skilled and Professional Manpower in Canada, 1945-1965 —
by The Economics and Research Branch, Department
of Labour, Canada
- Transportation in Canada —
by J-C. Lessard
- Industrial Concentration —
by The Canadian Bank of Commerce
- Housing and Social Capital —
by Yves Dubé, J. E. Howes and D. L. McQueen
- Financing of Economic Activity in Canada —
by Wm. C. Hood with the collaboration of
J. V. Poapst and L. M. Read
- Certain Aspects of Taxation Relating to Investment in
Canada by Non-Residents —
by J. Grant Glassco of Clarkson, Gordon & Co.,
Chartered Accountants
- Consumption Expenditures in Canada —
by David W. Slater
- Canada's Imports —
by David W. Slater
- The Future of Canada's Export Trade¹ —
by R. V. Anderson
- Canada - United States Economic Relations¹ —
by Irving Brecher and S. S. Reisman
- Canadian Commercial Policy¹ —
by J. H. Young
- Some Regional Aspects of Canada's Economic Development —
by R. D. Howland
- The Nova Scotia Coal Industry —
by Urwick, Currie Limited
- Canadian Economic Growth and Development from 1939 to 1955 —
by J. M. Smith

¹ This is one of a series of three studies on Canadian international economic relations prepared under the direction of S. S. Reisman.

Appendix D

MEMBERS OF THE STAFF

D. V. LePan

Secretary and Director of Research

N. A. Lafrance
Administrative Secretary

W. A. MacKay
Maurice Sauvé
Assistant Secretaries

J. B. Claxton
Counsel

B. M. Erb
Editorial Consultant

John Davis
D. H. Fullerton
Wm. C. Hood
S. S. Reisman

Assistant Directors of Research

J-C. Lessard

Transportation Consultant

Research Staff

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Irving Brecher
*Mrs. Jean M. Due
*A. F. Hailey
*E. C. Hope
*M. A. Mackenzie
Murray McDougall
*L. E. Poetschke
*J. B. Rutherford
W. G. Scott
*W. M. Sprung

R. V. Anderson
W. M. Drummond
*H. E. English
H. A. Hampson
J. D. Howe
W. Mackenzie
J. C. Mills
*S. L. Pringle
*A. E. Safarian
D. W. Slater
*R. W. Thompson

A. L. Best
Yves Dubé
*H. S. Gordon
*W. E. Haviland
R. D. Howland
G. T. McColm
J. V. Poapst
L. M. Read
Anthony Scott
*J. M. Smith
J. H. Young

*Part or limited time.

Appendix E

HEARINGS

THE COMMISSION held public hearings in 14 cities throughout Canada, including the capitals of all of the ten provinces. Of the submissions filed with the Commission, 260 were presented during the course of these hearings which extended over a total of 50 days.

In addition, members of the Commission travelled extensively in the Yukon Territory, the Northwest Territories and in Labrador, and through informal discussions with residents and officials in these areas learned at first hand about prospective developments in the Canadian North.

Public hearings of the Commission were conducted in the following cities:

St. John's	October 18, 1955.
Halifax	October 19 - 21, 1955.
Charlottetown	October 24, 1955.
Fredericton	October 26 - 27, 1955.
Winnipeg	November 14 - 16, 1955.
Regina	November 17 - 18, 1955.
Edmonton	November 21 - 23, 1955.
Calgary	November 24 - 25, 1955.
Victoria	November 28, 1955.
Vancouver	November 30 - December 2, 1955.
Quebec	January 16, 1956.
Montreal	January 18 - 20, 1956.
Toronto	January 23 - February 3, 1956.
Montreal	February 20 - 24, 1956.
Ottawa	February 27 - March 9, 1956.

Appendix F

SUBMISSIONS RECEIVED

THE COMMISSION received some 330 submissions plus a number of supplementary documents which were received and filed as exhibits with the original submissions. Opinions in writing were also received from a number of other organizations and individuals supporting particular submissions or presenting their own views informally and to these, as well as to those who prepared and submitted briefs, the Commission is indebted for assistance.

The following is a complete list of submissions received and filed as exhibits by the Commission. Each is listed by exhibit number and by the name of the person and organization that presented it.

- Ex. 1 — Hon. J. R. Smallwood, Premier, and Mr. H. Carl Goldenberg, Counsel, the Government of the Province of Newfoundland.
- Ex. 2 — Mayor L. A. Kitz, The City of Halifax.
- Ex. 3 — Mr. A. R. Harrington, Assistant General Manager, Nova Scotia Light and Power Company, Limited.
- Ex. 4 — Hon. H. D. Hicks, Premier, and Hon. W. T. Dauphinee, Minister of Trade and Industry, The Government of the Province of Nova Scotia.
- Ex. 5 — Mr. Stanton Sandford, President, Nova Scotia Federation of Agriculture.
- Ex. 6 — Mr. Roland Sutton, Secretary, Nova Scotia Fruit Growers' Association.
- Ex. 7 — Mr. A. C. Carter, Director and General Manager, Cossor (Canada) Limited.
- Ex. 8 — Mr. L. A. Forsyth, President, Dominion Steel and Coal Corporation, Limited, on behalf of Dominion Coal Company Limited; Old Sydney Collieries Limited; Cumberland Railway and Coal Company; Acadian Coal Company Limited.
- Ex. 9 — Mr. L. A. Forsyth, President, Dominion Steel and Coal Corporation, Limited, — Memorandum in connection with the Primary Iron and Steel Industry of Nova Scotia.

- Ex. 10 — Mr. L. A. Forsyth, President, Dominion Steel and Coal Corporation, Limited, — Past, Present and Future Prospects of the Transportation Factor in the Movement of DOSCO's Products from Its Nova Scotia Operations.
- Ex. 11 — Mr. Ben O'Neil, President, Local Union 1064, United Steelworkers of America.
- Ex. 12 — Mr. Thomas MacLachlan, President, District 26, United Mine Workers of America.
- Ex. 13 — Mr. J. K. Bell, Secretary-Treasurer, Maritime Marine Workers' Federation.
- Ex. 14 — Hon. A. W. Matheson, Premier, The Government of the Province of Prince Edward Island.
- Ex. 15 — Mayor J. David Stewart, The City of Charlottetown.
- Ex. 16 — Mr. J. L. Dewar, Secretary, The Prince Edward Island Federation of Agriculture.
- Ex. 17 — Mr. L. F. Macdonald, President, The Prince Edward Island Teachers' Federation.
- Ex. 18 — Hon. Hugh John Flemming, Premier, The Government of the Province of New Brunswick.
- Ex. 19 — Mayor H. S. Wright, The City of Fredericton.
- Ex. 20 — Mr. Nelson Mann, Executive Manager, The Atlantic Provinces Economic Council.
- Ex. 21 — Mr. D. A. Elliot, President, The New Brunswick Council of Labour, C.C.L.
- Ex. 22 — Mr. E. H. Brewer, 1st Vice-President, The New Brunswick Teachers' Association.
- Ex. 23 — Mr. J. L. G. Cassidy, Director, New Brunswick Vocational Institute.
- Ex. 24 — Hon. D. L. Campbell, Premier; Hon. R. D. Turner, Minister of Industry and Commerce; Hon. R. D. Robertson, Minister of Agriculture; The Government of the Province of Manitoba.
- Ex. 24A — The Government of the Province of Manitoba — (supplementary submission—"Processing of Agricultural Products in Manitoba").
- Ex. 24B — The Government of the Province of Manitoba — (supplementary submission — "Financing of Small Business in Manitoba").
- Ex. 25 — Alderman Charles Simonite, Chairman, Finance Committee of the Council, The City of Winnipeg.
- Ex. 26 — Mr. W. J. Parker, President, Manitoba Pool Elevators.
- Ex. 27 — Mr. E. L. Brown, President and Managing Director, Sherritt Gordon Mines Ltd.
- Ex. 28 — Mr. F. D. Shepherd, Executive Vice-President, The Mid-West Metal Mining Association.

- Ex. 29 — Mr. J. D. Wilton, President, The Manitoba Federation of Agriculture and Co-operation.
- Ex. 30 — Mr. J. N. Galonsky, Secretary-Treasurer, The Manitoba Farmers' Union.
- Ex. 31 — Mr. A. S. Leach, Chairman of the Board, The Winnipeg Grain Exchange.
- Ex. 32 — Mr. C. F. Greene, Honorary Secretary, Manitoba Division, Community Planning Association of Canada.
- Ex. 33 — Mr. E. W. Thrift, Director, Metropolitan Planning Commission of Greater Winnipeg.
- Ex. 34 — Mayor J. H. Chipperfield, Minnedosa; President, Manitoba Urban Association.
- Ex. 35 — Hon. T. C. Douglas, Premier; Hon. I. C. Nollett, Minister of Agriculture; Hon. J. H. Brockelbank, Minister of Natural and Mineral Resources; Hon. C. M. Fines, Provincial Treasurer; The Government of the Province of Saskatchewan.
 - Ex. 35A — Hon. I. C. Nollett, Minister of Agriculture, The Government of the Province of Saskatchewan — (supplementary submission — "Saskatchewan's Agricultural Resources").
 - Ex. 35B — The Government of the Province of Saskatchewan — (supplementary submission — Royal Commission on Agriculture and Rural Life — report — "2. Mechanization and Farm Costs").
 - Ex. 35C — The Government of the Province of Saskatchewan — (supplementary submission — Royal Commission on Agriculture and Rural Life — report — "1. The Scope and Character of the Investigation").
 - Ex. 35D — The Government of the Province of Saskatchewan — (supplementary submission — Royal Commission on Agriculture and Rural Life — report — "3. Agricultural Credit").
 - Ex. 35E — The Government of the Province of Saskatchewan — (supplementary submission — Royal Commission on Agriculture and Rural Life—report—"4. Rural Roads and Local Government").
 - Ex. 35F — The Government of the Province of Saskatchewan — (supplementary submission — Royal Commission on Agriculture and Rural Life — report — "5. Land Tenure").
- Ex. 36 — Mayor L. H. Lewry, City of Moose Jaw.
- Ex. 37 — Mayor L. H. Hammond, City of Regina.
- Ex. 38 — Mr. L. B. Thomson, Director, P.F.R.A., Canada Dept. of Agriculture.
 - Ex. 38A — Mr. L. B. Thomson, Director P.F.R.A., Canada Dept. of Agriculture (supplementary submission).
- Ex. 39 — Mr. Olaf Turnbull, Director, Saskatchewan Farmers Union.
- Ex. 40 — Mr. R. J. Henderson and Mr. I. E. Moore, Saskatchewan Federation of Labour (C.C.L.) and Saskatchewan Provincial Federation of Labour (T.L.C.).

- Ex. 41 — Mr. E. J. Goos, Manager, Prince Albert Chamber of Commerce on behalf of The Council of the City of Prince Albert.
- Ex. 42 — Mr. E. J. Goos, Manager, The Prince Albert Chamber of Commerce.
- Ex. 43 — Mr. J. H. Wesson, President, The Saskatchewan Wheat Pool.
- Ex. 44 — Mr. M. A. MacPherson, Counsel, Saskatchewan Rivers Development Association.
- Ex. 45 — Mr. Alex Aitken, Manager, The Regina Chamber of Commerce, and Mr. H. A. Purdy, Executive Secretary, Saskatchewan Board of Trade.
- Ex. 46 — Mr. W. E. Simpson, Counsel, Government of the Province of Alberta, Special submission by the Government of the Province of Alberta.
- Ex. 47 — Hon. E. C. Manning, Premier, and Hon. A. R. Patrick, Minister of Economic Affairs, Government of the Province of Alberta.
- Ex. 47A — Mr. J. J. Frawley, Special Counsel, Executive Council of Alberta, Government of the Province of Alberta — (supplementary submission).
- Ex. 48 — Mr. C. J. Anderson, Manager, on behalf of the Board of Trustees, Eastern Irrigation District, Brooks, Alta.
- Ex. 49 — Mr. M. W. Mackenzie, President, Canadian Chemical & Cellulose Company, Ltd.
- Ex. 50 — Mr. R. G. Robertson, Commissioner of the Northwest Territories.
- Ex. 51 — Mayor G. A. Allen, Yellowknife, Municipal District of Yellowknife and Yellowknife Board of Trade.
- Ex. 52 — Mr. F. H. Collins, Commissioner of the Yukon Territory.
- Ex. 53 — Mr. C. E. White, General Manager, United Keno Hill Mines Ltd.
- Ex. 54 — Mr. Harold Hine, Counsel and Director, The Board of Trade of the City of Whitehorse, Yukon Territory.
- Ex. 55 — Mr. Roy Marler, President, The Alberta Federation of Agriculture.
- Ex. 56 — Mayor Wm. Hawrelak, The City of Edmonton.
- Ex. 57 — Mr. L. Gertler, Director and National Counsellor, The Community Planning Association of Canada, Alberta Division.
- Ex. 58 — Dr. R. Hilton, President, Edmonton Branch, Alberta Institute of Agrolologists.
- Ex. 59 — Mayor D. H. MacKay, City of Calgary.
- Ex. 60 — Mr. Lawrence E. Kindt, Lawrence E. Kindt & Associates, Consulting Economists.
- Ex. 61 — Mr. P. L. Kartzke, Chairman, Board of Governors, Canadian Petroleum Association.
- Ex. 61A — Canadian Petroleum Association — (supplementary submission "Income Tax Applicable to the Oil and Gas Industry in Canada").
- Ex. 62 — Mr. E. D. Loughney, Vice-President, Canadian Gulf Oil Company.

- Ex. 63 — Mr. W. C. Whittaker, Managing Director, The Coal Operators' Association of Western Canada.
- Ex. 64 — Mr. J. E. Brownlee, President, United Grain Growers Limited.
- Ex. 65 — Mr. R. S. Munn, President, Burns & Co. Limited.
- Ex. 66 — Mr. Ben S. Plumer, Chairman, Alberta Wheat Pool.
- Ex. 67 — Mr. S. B. Slen, President, Lethbridge Branch, Agricultural Institute of Canada.
- Ex. 68 — Mr. Charles Weir, Alberta Representative, Edmonton & Calgary Metal Workers, International Union of Mine, Mill and Smelter Workers (Canada).
- Ex. 69 — Mr. Travers Smith, President, Cardston and District Sheepmen's Association.
- Ex. 70 — Mr. E. A. Hutchinson, The Calgary House Builders Association.
- Ex. 71 — Mr. Glenn E. Neilson, President, Husky Oil & Refining Ltd.
- Ex. 72 — Mr. Knut Magnusson, Fogelvik Farms, Innisfail, Alberta.
- Ex. 73 — Hon. W. A. C. Bennett, Premier and Hon. R. W. Bonner, Attorney General, Government of the Province of British Columbia.
- Ex. 73A — Government of the Province of British Columbia — (documentary submission).
- Ex. 74 — Mayor C. L. Harrison, The City of Victoria.
- Ex. 75 — Mayor Geo. Muir, Nanaimo, and Mr. D. M. Greer, Nanaimo Chamber of Commerce, The Corporation of the City of Nanaimo and Nanaimo Chamber of Commerce.
- Ex. 76 — Mr. G. F. Dunn, President, The Victoria Chamber of Commerce.
- Ex. 77 — Mr. J. W. Casey, Reeve, The Municipal Council of the Corporation of the District of Saanich.
- Ex. 78 — Mr. J. R. Tolmie, Counsel, Northwest Power Industries Limited.
- Ex. 79 — Mayor F. J. Hume, The City of Vancouver.
- Ex. 80 — Mr. R. A. Mahoney, Management Research (Western) Ltd., Consultant for Forest Industry Associations of British Columbia, comprised of the following:
- British Columbia Loggers Association;
 - British Columbia Lumber Manufacturers Association;
 - Canadian Pulp & Paper Association (Western Division);
 - Consolidated Red Cedar Shingle Association;
 - Interior Lumber Manufacturers Association;
 - Northern Interior Lumbermen's Association;
 - Plywood Manufacturers Association of British Columbia;
 - The Truck Loggers Association.
- Ex. 81 — Mr. P. R. U. Stratton, The Vancouver Housing Association.
- Ex. 82 — Mr. B. Patterson, Planning Officer, The Municipal District of West Vancouver.

- Ex. 83 — Mr. W. T. Lane, Chairman, The British Columbia Division of the Community Planning Association of Canada.
- Ex. 84 — Mr. J. C. Oliver, City Engineer of Vancouver and Member, The Technical Committee for Metropolitan Highway Planning (British Columbia).
- Ex. 85 — Mr. C. D. Ovans, General Secretary, B.C. Teachers' Federation.
- Ex. 86 — Mr. E. J. Irwin, President, British Columbia Automobile Association.
- Ex. 87 — Mr. Russell Baker, President and General Manager, Pacific Western Airlines Ltd.
- Ex. 88 — Mr. C. J. Rogers, Managing Director, The White Pass and Yukon Corporation Limited.
- Ex. 89 — Mr. G. F. Edwards, President, Senior Citizens' Association of British Columbia.
- Ex. 90 — Dr. H. V. Warren, British Columbia & Yukon Chamber of Mines.
- Ex. 91 — Mr. G. W. G. McConachie, President, Canadian Pacific Airlines Ltd.
- Ex. 92 — Mr. S. Jenkins, President, Marine Workers and Boilermakers' Industrial Union, Local 1, for the Committee of Maritime Unions, comprised of the following:
 Shipyards General Workers Federation;
 Grain Elevator Workers, Local 333;
 International Longshoremen's and Warehousemen's Union, Locals 501, 507, 509.
- Ex. 93 — Mr. Charles N. Woodward, Vice-President, Woodward Stores Limited.
- Ex. 94 — Mr. E. L. Harrison, Vice-Chairman, The Fisheries Association of British Columbia.
- Ex. 95 — Mr. Alan H. Williamson, Vice-President, Wood, Gundy & Company Ltd.
- Ex. 96 — Mr. R. K. Gervin, General Secretary-Treasurer, Vancouver, New Westminster and District Trades and Labour Council.
- Ex. 97 — Mr. Homer J. Stevens, General Secretary-Treasurer, United Fishermen and Allied Workers Union.
- Ex. 98 — Mr. J. W. Wilson, Executive Director, The Lower Mainland Regional Planning Board of British Columbia.
- Ex. 99 — Mr. G. Sleath, Better B.C. Institute.
- Ex. 100 — Mr. Neal Harlow, Librarian, The Library, The University of British Columbia.
- Ex. 101 — Mr. S. J. Hammitt, President, Western Canada Steel Limited.
- Ex. 102 — Mr. D. A. B. Murray, President, Downtown Business Association of Winnipeg.
- Ex. 103 — Mr. I. Graham, President, Property Owners Association of Calgary.
- Ex. 104 — Mayor W. Hamel, The City of Quebec.
- Ex. 105 — Mr. J. Peter Nadeau, Director, Dairy Technicians Association.
- Ex. 106 — Hon. C. Vaillancourt, Manager, Fédération des Caisses Populaires Desjardins de Québec.

- Ex. 107 — Mr. F. G. Ferrabee, President, The Machinery and Equipment Manufacturers Association of Canada.
- Ex. 108 — Mr. T. R. McLagan, President, Canada Steamship Lines Ltd.
- Ex. 109 — Mr. T. R. McLagan, President, The Canadian Shipbuilding and Ship Repairing Association.
- Ex. 110 — Maj. Gen. G. B. Howard, Executive Vice-President and General Manager, Canadian Industrial Preparedness Association.
- Ex. 111 — Mr. R. M. Fowler, President, Canadian Pulp and Paper Association.
- Ex. 112 — Mr. E. Howard Smith, President, Howard Smith Paper Mills Limited.
- Ex. 113 — Mr. Donald Gordon, Chairman and President, Canadian National Railways.
- Ex. 114 — Mr. N. R. Crump, President, Canadian Pacific Railway Company.
- Ex. 115 — Mr. G. R. McGregor, President, Trans-Canada Air Lines.
- Ex. 116 — Mr. W. G. Miller, President, Montreal Locomotive Works, Ltd.
- Ex. 117 — Mr. E. J. Gosford, President, Canadian Car & Foundry Company Limited.
- Ex. 118 — Mr. A. P. Shearwood, Chairman and Chief Executive Officer, National Steel Car Corporation, Limited.
- Ex. 119 — Mr. J. G. Notman, President and General Manager, Canadair Limited.
- Ex. 120 — Mr. A. L. Stein, Counsel, The Montreal Dress Manufacturers' Guild.
- Ex. 121 — Mr. Vernon E. Johnson, President, Canadian International Paper Company.
- Ex. 122 — Mr. F. G. Gardiner, Chairman of the Council, The Municipality of Metropolitan Toronto.
- Ex. 123 — Mayor Nathan Phillips, The City of Toronto.
- Ex. 124 — Dr. Solomon Barkin, Director of Research, Textile Workers Union of America, — C.C.L. - C.I.O.
- Ex. 125 — Mr. J. R. White, President, Imperial Oil Limited.
- Ex. 126 — Mr. M. S. Beringer, President, British American Oil Company Limited.
- Ex. 127 — Mr. D. W. Ambridge, President, and General Manager, Abitibi Power & Paper Company Limited.
- Ex. 128 — Prof. J. K. Galbraith, Harvard University.
- Ex. 129 — Mr. V. C. Wansbrough, Vice-President and Managing Director, Canadian Metal Mining Association.
- Ex. 130 — Mr. M. S. Fotheringham, Director, Ontario Mining Association.
- Ex. 131 — Mr. H. L. Roscoe, Vice-President, Noranda Mines, Limited.
- Ex. 132 — Mr. F. M. Connell, President, Conwest Exploration Limited.
- Ex. 133 — Mr. H. S. Scott, Chief Geologist, Aeromagnetic Surveys Limited.
- Ex. 134 — Mr. H. S. Wingate, President, The International Nickel Company of Canada, Limited.
- Ex. 135 — Mr. T. Lindsley, Chairman of the Board, Ventures Ltd.
- Ex. 136 — Mr. James Stewart, President, The Canadian Bank of Commerce.
- Ex. 137 — Prof. Vincent Bladen, University of Toronto.

- Ex. 138 — Mr. J. F. Brown, Secretary, The Saskatchewan Federation of Agriculture.
- Ex. 139 — Hon. Leslie M. Frost, Prime Minister, Government of the Province of Ontario.
- Ex. 140 — Dr. Richard L. Hearn, Chairman, Hydro-Electric Power Commission of Ontario.
- Ex. 140A — Dr. Richard L. Hearn, Chairman, Hydro-Electric Power Commission of Ontario. — (supplementary submission).
- Ex. 141 — Mr. S. M. Blair, President, Canadian Bechtel Limited.
- Ex. 142 — Mr. C. H. Millard, Canadian Director, United Steelworkers of America.
- Ex. 143 — Mr. C. S. Jackson, President, District 5 Council, United Electrical Radio and Machine Workers of America, (U.E.) — Canadian Section.
- Ex. 144 — Mr. W. F. McLean, President, Canada Packers Limited.
- Ex. 145 — Mr. Donald G. Smith, Field Secretary, Credit Union National Association.
- Ex. 146 — Mr. C. W. McInnis, President, Ontario Hog Producers' Association.
- Ex. 147 — Mr. David S. Holbrook, Executive Vice-President, Algoma Steel Corporation, Limited.
- Ex. 148 — Mr. H. G. Hilton, President, The Steel Company of Canada Ltd.
- Ex. 149 — Mr. A. G. Wright, President, Dominion Foundries & Steel Ltd.
- Ex. 150 — Mr. Gordon Hamblin, President, Confectionery, Chocolate & Cocoa Industries of Canada.
- Ex. 151 — Mr. James S. Duncan, Chairman and President, Massey-Harris-Ferguson Limited.
- Ex. 152 — Mr. R. B. Bradley, President, International Harvester Company of Canada, Limited.
- Ex. 153 — Mr. N. R. Crawford, President, Dow Chemical of Canada, Limited.
- Ex. 154 — Mr. W. M. V. Ash, President, Shell Oil Company of Canada Limited.
- Ex. 155 — Mr. R. M. Sale, President, Ford Motor Company of Canada, Limited.
- Ex. 156 — Mr. E. C. Row, President and General Manager, Chrysler Corporation of Canada, Limited.
- Ex. 157 — Mr. J. M. Pigott, President, Pigott Construction Company Limited.
- Ex. 158 — Mr. L. J. McGowan, Vice-President and General Manager, The Foundation Company of Canada Limited.
- Ex. 159 — Mr. P. N. Gross, President, Gypsum, Lime and Alabastine, Canada, Limited.
- Ex. 160 — Mr. G. T. Klager, President and Managing Director, Dominion Woollens and Worsteds Limited.
- Ex. 161 — Mr. H. M. Turner, President, Canadian Electrical Manufacturers Association.
- Ex. 162 — Mr. J. H. Goss, President, Canadian General Electric Company Limited.
- Ex. 163 — Mr. J. M. Thompson, Vice-President and Comptroller, Canadian Westinghouse Company Ltd.

- Ex. 164 — Mr. O. W. Titus, Vice-President and General Manager, Canada Wire & Cable Company Limited.
- Ex. 165 — Dr. W. H. Watson, Director, The Computation Centre, University of Toronto.
- Ex. 166 — Mr. J. G. Glassco, Clarkson, Gordon & Co.
- Ex. 167 — Mr. E. G. Burton, President, Simpsons Limited.
- Ex. 168 — Mr. F. H. Kortwright, President, The Conservation Council of Ontario.
- Ex. 169 — Mr. D. N. Kendall, President, The Photographic Survey Corporation Limited.
- Ex. 170 — Dr. G. Ross Lord, The Association of Professional Engineers of the Province of Ontario.
- Ex. 171 — Mr. J. S. Duncan, Chairman, The Dollar Sterling Trade Council.
Ex. 171A — The Dollar Sterling Trade Council — (supplementary submission, summary of brief).
- Ex. 172 — Mr. P. J. Chadsey, Chairman, The Security Analysts' Association of Toronto.
- Ex. 173 — Mr. J. D. Cowan, President, Canadian Importers and Traders Association, Inc.
- Ex. 174 — Mr. Irving Fairty, General Counsel, Toronto Transit Commission on behalf of Canadian Transit Association.
- Ex. 175 — Mr. G. B. Smith, Manager and Secretary, The Rubber Association of Canada.
- Ex. 176 — Mr. R. C. Berkinshaw, President and General Manager, The Goodyear Tire & Rubber Company of Canada, Limited.
- Ex. 177 — Mr. Crawford Gordon Jr., President and General Manager, A. V. Roe Canada Limited.
- Ex. 178 — Mr. Harold Evans, President, The Canadian Machine Tool Builders Association.
- Ex. 179 — Hon. C. E. Mapledoram, Minister of Lands and Forests, Ontario, and Mr. G. C. Wardrope, M.L.A., on behalf of Northwestern Ontario Associated Chambers of Commerce, Northwestern Ontario Municipal Association, and Northwestern Ontario Development Association.
- Ex. 180 — Mayor Jean Drapeau, The City of Montreal.
- Ex. 181 — Mr. H. R. Crabtree, President, Primary Textiles Institute.
- Ex. 182 — Mr. G. B. Gordon, President, Dominion Textile Company Limited.
- Ex. 183 — Mr. L. C. Bonnycastle, President, Canadian Cottons Limited.
- Ex. 184 — Mr. Drummond Giles, President and General Manager, Courtaulds (Canada) Limited.
- Ex. 185 — Mr. Gerald L. Bruck, President, Bruck Mills Limited.
- Ex. 186 — Mr. François E. Cleyn, Managing Director, Leach Textiles Limited.
- Ex. 187 — Mr. Gordon R. Ball, President, Bank of Montreal.

- Ex. 188 — Dr. R. H. Common, The Canadian Food Technologists Association.
- Ex. 189 — Dr. Come Carbonneau, Gourd-Riverin Syndicate.
- Ex. 190 — Mr. Sam Steinberg, President and Managing Director, Steinberg's Limited.
- Ex. 191 — Mr. Raymond Dupuis, President and Managing Director, Dupuis Frères, Limitée.
- Ex. 192 — Mr. Bruce A. C. Hills, Vice-President, The Canadian Management Council.
- Ex. 193 — Mr. W. H. Durrell, General Manager, Hollinger-Hanna Limited, on behalf of:
 Iron Ore Company of Canada;
 Hollinger North Shore Exploration Company Limited;
 Labrador Mining and Exploration Company Limited.
- Ex. 194 — Mr. A. L. Penhale, President and Managing Director, Asbestos Corporation Limited.
- Ex. 195 — Mr. Bernard Shane, Vice-President, International Ladies' Garment Workers' Union.
- Ex. 196 — Mr. R. E. Powell, President, Aluminum Company of Canada, Ltd.
- Ex. 197 — Mr. W. Taylor-Bailey, President and Managing Director, Dominion Bridge Company, Limited.
- Ex. 198 — Mr. Roger Regimbald, Director, L'Association Professionnelle des Industriels.
- Ex. 199 — Mr. G. Harold Fiske, President, The Canadian Forestry Association.
 Ex. 199A — Mr. J. L. Van Camp, General Manager, Canadian Forestry Association (supplementary submission).
- Ex. 200 — Mr. J. M. Breen, President and General Manager, Canada Cement Company Limited.
- Ex. 201 — Mr. W. N. Hall, Executive Vice-President, Dominion Tar & Chemical Company, Limited.
- Ex. 202 — Dr. J. R. Donald, President, J. T. Donald & Co. Limited.
- Ex. 203 — Mr. H. H. Lank, President, Du Pont Company of Canada Limited.
- Ex. 204 — Mr. H. Greville Smith, President, Canadian Industries Limited.
- Ex. 205 — Dr. R. S. Jane, Vice-President, Shawinigan Chemicals Limited.
- Ex. 206 — Mr. Eliot S. Frosst, President, Charles E. Frosst & Co.
- Ex. 207 — Mr. F. R. Deakins, President, RCA Victor Company, Ltd.
- Ex. 208 — Mr. R. D. Harkness, President, Northern Electric Company Limited.
- Ex. 209 — Mr. K. R. Patrick, President and Managing Director, Canadian Aviation Electronics Ltd.
- Ex. 210 — Mr. S. M. Finlayson, President, Canadian Marconi Company.
- Ex. 211 — Mr. D. G. Schacter, Chairman, National Federation of Canadian University Students Scholarship Committee of Sir George Williams College.

- Ex. 212 — Mr. Fridolin Simard, President, L'Union des Municipalités de la Province de Québec (preliminary submission).
Ex. 212A — L'Union des Municipalités de la Province de Québec.
- Ex. 213 — Mr. Roméo Martin, President, Le Conseil de la Coopération du Québec.
- Ex. 214 — Mr. Claude Jodoin, President, The Trades and Labor Congress of Canada and Mr. A. R. Mosher, President, the Canadian Congress of Labour (joint submission).
- Ex. 215 — Mr. H. V. Lush, Vice-President, The Canadian Manufacturers' Association.
- Ex. 216 — Mr. J. R. Hughes, President, The Investment Dealers' Association of Canada.
- Ex. 217 — Mr. J. David Stewart, Mayor of Charlottetown, P.E.I. and President, Canadian Federation of Mayors and Municipalities.
- Ex. 218 — Mr. W. C. Norris, Chairman of the Board and President, Canadian Trucking Associations, Inc.
- Ex. 219 — Mr. Camille Archambault, Assistant to the President and Director of Public Relations, L'Association du Camionnage du Québec Inc.
- Ex. 220 — Mr. Roy Halliday, President, The Canadian Lumbermen's Association.
- Ex. 221 — Mr. J. W. B. Sisam, President, The Canadian Institute of Forestry.
- Ex. 222 — Mr. Walter C. Koerner, President, Alaska Pine & Cellulose Limited.
- Ex. 223 — Mr. R. L. Weldon, President, Bathurst Power & Paper Company Limited.
- Ex. 224 — Mr. J. G. Crean, President, The Canadian Chamber of Commerce.
- Ex. 225 — Mayor Charlotte Whitton, The City of Ottawa.
- Ex. 226 — Miss Charlotte Whitton, Mayor, City of Ottawa (personal submission).
- Ex. 227 — Mr. C. A. Pollack, President, Radio-Electronics-Television Manufacturers Association of Canada.
- Ex. 228 — Mr. R. M. Brophy, President, Philips Canadian Industrial Development Company Limited.
- Ex. 229 — Mr. Harry D. Greb, President, The Shoe Manufacturers' Association of Canada.
- Ex. 230 — Mr. W. J. LeClair, President, Canadian Federation of Property Owners' Associations.
- Ex. 231 — Dr. J. C. Griffin, General Director, Canadian Mental Health Association.
- Ex. 232 — Mr. W. Gordon Wood, First Vice-President, Canadian Tourist Association.
- Ex. 233 — Mr. R. F. Legget, Chairman, Associate Committee on the National Building Code, National Research Council.
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 Ex. 329A — La Chambre de Commerce de Québec (supplementary
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